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OUR COLONIAL ISSUE.

THE CHEMIST AND DRUGGIST of April 28 will be specially circulated to the drug-trade of the British Colonies India, Egypt, China, and Japan. It will be a splendid number for advertising in. As we have no room this week to say more about it, the Publisher undertakes to answer fully all inquiries.

NEXT WEEK

we shall go to press a day earlier than usual—that is, on Wednesday—in order that we may get all copies of the C. & D. for home and abroad posted before Good Friday. Will correspondents please note? Advertisements for the Supplement should be sent a day earlier, and applications for the Supplement must be made not later than Thursday. The Office, 42 Cannon Street, E.C., will be closed from Thursday, April 12, at 5 P.M., to Tuesday, April 17, at 9 A.M.

Summary.

MR. RITCHIE appears to be yielding on Clause 2 (p. 593).

A LARGE NUMBER of drug contracts have been settled (p. 570).

FURTHER FACTS about the Vimbos promotion are reported (p. 596).

THE TRUE SHAMROCK is *Oralis Acet osella*, says C. C. B. (p. 602).

M. JOSEPH BERTRAND, Secretary of the Paris Academy of Sciences, is dead (p. 573).

A KIMBERLEY CHEMIST tells on p. 575 how he and his *confrères* got along during the siege.

MR. JAMES HOGG, JUN., of Belfast, has been fined 5*l.* for infringing the Pharmacy Act (p. 597).

THE VINEGAR which a public analyst said contained sulphuric acid has been held not to (p. 537).

NEW STORE-PRICES, including those affected by the advanced spirit duty, are printed on p. 570.

WE report fully Sir Henry Roscoe's memorial lecture on Bunsen before the Chemical Society (p. 530).

REMINISCENCES OF SCOTCH PHARMACY, by Mr. David McLaren, on p. 573, deal especially with Edinburgh.

MR. LORD GIFFORD has further expounded his views of the Pharmaceutical Council at Dewsbury (p. 539).

THE SACCHARIN CASE in the High Courts finished last week, when Mr. Justice Buckley reserved judgment (p. 595).

BETTER PAY from stores is a commendable policy, says "Xrayser" (p. 591), and other correspondents (p. 603).

TWO INVALUABLE OILS have been further investigated—West Indian sandalwood oil (p. 593) and chaulmoogra oil (p. 595).

TWO HUNDRED LONDON DOCTORS met in Cannon Street Hotel on Wednesday, to protest against the Midwives Bill (p. 571).

A LONDON CHEMIST'S ASSISTANT was found asleep on Victoria Embankment, and died in a hospital. The facts are reported on p. 570.

PHARMACEUTICAL RECIPROCITY in the British Empire appears to have taken a forward step through the advocacy of Mr. A. B. Chater (p. 575).

DR. GEORGE CULL, whose portrait we print, has given Glasgow chemists' assistants a lucid description of the stereo chemistry of carbon (p. 584).

THE NON-SERVING of a public analyst's certificate in a camphorated-oil case has been held to be good reason for dismissing the summons (p. 537).

CLAUSE 2 of the Companies Bill has been discussed at several provincial meetings (pp. 584–590), and the Pharmaceutical Council has received ten resolutions about it (p. 578).

SEVENTEEN GENTLEMEN are desirous of getting the seven vacant seats in the Pharmaceutical Council. Their names are given on p. 577, and portraits of a few of them on p. 579.

A PAPER on the manufacture and analysis of caramel was read to the London Section of the Society of Chemical Industry on Monday evening. It shows how the best caramel is made (p. 583).

BOOTS (LIMITED) have been selling pictures at cut rates, and print-sellers having joined together to stop supplies, Boots (Limited) are attempting in the High Court to raise the boycott (p. 596).

PROFESSOR CARTER, of Birmingham, has addressed the local chemists' association on drugs and treatment, also speaking about the development of pharmacy and the 1898 B.P., and he got angry about "Diseases and Remedies" (p. 531 and p. 591).

THE PHARMACEUTICAL COUNCIL on Wednesday had mainly routine business to transact; but Dr. Thomas Stevenson's report on the examinations in London was received, and it was agreed to purchase a house in Strawberry Hill as an investment (p. 577).

B.P. STANDARDS AND STANDARDISATION were the subject of a paper and discussion at the C.A.A. last week, when valuable points on assaying liquid galenicals were given, and the need for pharmaceutical work being done in the Pharmaceutical Research Laboratory was pointed out (p. 537).

THE IODINE-COMBINATION AND THE CAMPHOR MONOPOLY are the principal topics of interest in the markets this week. The probabilities of a decline in the former article are freely discussed in drug circles. Both German and refined camphor have been advanced. Cod-liver oil is a rising market, although demand is slow. Quinine moves uneasily in the speculative market (p. 605).

English News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Store-prices.

The following are amongst the alterations in the price-list of the Civil Service Supply Association for April:—

ADDED TO STOCK.—Spiratine, 2s. 9d. per doz. tins; tripods for same, 4d. each.

ADVANCED.—Bed-baths, from 8s. 3d. to 9s. 2d. each; Hardy's Brompton cough-specific, from 9½d. to 11d., and from 2s. 1d. to 2s. 2d. per bottle; glycerin, from 11d. to 1s. 1d. per 2-oz. bottle; lime-water, from 5d. to 6d. per quart bottle.

The following are advanced, it is stated, owing to the increased duty on spirit:—

Camphor, compound liniment	from 10½d. to 11d. per 4-oz. bottle.
" spirit of	8½d. " 9d. " 4 "
Chloric ether	5½d. " 6d. " 2 "
Essence, cloves	3½d. " 4d. " 1 "
" ginger	6½d. " 7d. " 2 "
Friars' balsam	3½d. " 4d. " 1 "
Opodeldoe	5d. " 5½d. " 2 "
Spirit, lavender	1s. " 1s. 1d. " 4 "
" nitre	10d. " 11d. " 4 "
" sal volatile	10d. " 10½d. " 4 "
Tincture, arnica	9d. " 9½d. " 4 "
" bark	9d. " 9½d. " 4 "
" cardam. co.	7½d. " 8½d. " 4 "
" gentian	7d. " 7½d. " 4 "
" iodine	5d. " 5½d. " 1 "
" myrrh	6d. " 6½d. " 2 "
" orange-peel	10½d. " 11d. " 4 "
" rhubarb	8d. " 8½d. " 4 "
" senna, comp.	7½d. " 8½d. " 4 "
" steel	5d. " 5½d. " 2 "

The Army and Navy Stores' circular contains the following:—

ADVANCED.—Carbolic acid, detached crystals, medical, stoppered bottles, 1s. 10d. per lb.; carbonate of ammonia, 10d. per 1-lb. bottle; salicine, 1s. 8d. per oz.; zymine ("Pepule" brand), 1s. and 3s. per bottle; spirits of wine, pure, 1s. 9d. per ½-pint bottle; Bath puffs, 3s. 3d., 4s. 6d., and 6s. each.

ADDED.—Quentin's perfumed wafers, 1s. 3d. per tube; otto of rose, in original bottles, 20s. each; Atkinson's "Mareotis," 1s. 9d. per bottle; laxative bromo-quinine, 11½d. per box; Seabury's improved corn-plasters, 7d. per box; "Valtine" meat, malt, and pepsine globules, 2s. 4d. per box; ditto, and quinine, 2s. 1d.; ditto, and malt, 1s. 9d.; Wampole's cod-liver oil, 2s. 2d., 4s. 2d. per bottle.

Drug-contracts.

The following contracts have been settled:—

Bridgend and Cowbridge Union.—Mr. D. Jenkins, chemist. Bridgend, for drugs.

Burton-on-Trent.—Mr. H. Staley, for chemists' goods.

Cambridge.—Messrs. S. B. Wallis & Son, for carbolic soap 19s. 6d. per cwt., arrowroot 8d. lb.

Dewsbury.—Mr. John Day, Savile Town, for drugs and oils.

Dover.—Mr. W. Thompson, for chemicals at 18½ per cent. below scheduled prices.

East Preston.—Messrs. G. T. Cox & Son, Eastcheap, E.C., for nightlights at 4s. per doz. boxes, arrowroot at 6d. per lb., carbolic soap at 15s. 6d. per cwt.; Mr. George Light, Arundel, for quinine at 1s. 9d. per oz., and cod-liver oil at 5s. per gal.

Faversham.—Mr. M. Laxon, chemist to the Rural District Council.

Gravesend.—Mr. C. R. Sharman, for drugs.

Kettering.—Mr. J. F. Thursfield, chemist, Kettering, for 15-per-cent. pink carbolic powder, in casks, 5l. 4s. per ton; Fletcher's pino-phenol, in 40-gal. casks, 1s. 3½d. per gal.; Seabury's 1s. sulphur candles, 7s. 2d. per dozen; gummed strips, 2 inches wide, 4s. 10d. per dozen.

Lewisham.—Messrs. Anderson, Anderson & Anderson (Limited), Queen Victoria Street, E.C., for waterproof sheeting; Messrs. Willows, Francis, Butler & Thompson, Aldersgate Street, E.C., for drugs; Messrs. Maw, Son & Thompson, Aldersgate Street, E.C., for surgical appliances.

London County Council.—Messrs. Burgoyne, Burbidges & Co., for chemicals to December 31, 1900.

Louth.—Mr. W. C. Street, for cod-liver oil at 6s. 6d. per gal., Howards' quinine at 3s. per oz., and linseed meal at 2½d. per lb.

Ludlow.—Mr. H. V. Truman, for drugs and medicines to the workhouse.

Malmesbury.—Mr. H. N. Ratcliffe, for carbolic soap at 18s. per cwt.

Midhurst.—Mr. F. R. Rump, for cod-liver oil.

Runcorn.—Mr. J. H. Weston, for drugs, and Messrs. Newton, Chambers & Co., for disinfectants.

Ruthin.—Messrs. Row & Son, for arrowroot, cod-liver oil, soap, and vinegar.

Penzance.—Messrs. N. J. Hall & Sons, for Natal arrowroot 9d. per lb., linseed meal 2½d. per lb., liquorice 11d. per lb., Robinson's groats 8d. per lb.

Southampton.—With reference to this union contract Messrs. Barron, Harveys & Co. inform us that their list has been used without their authority, and their goods are not referred to.

Stroud.—Mr. S. Thornton, for carbolic soap at 2½d. per lb., and arrowroot at 1s. per lb.; Mr. G. Bert, for crushed linseed at 18s. 8d. per cwt., and best pale soap at 22s. per cwt.

Worcester.—Messrs. George & Welch, for drugs and medicines to the workhouse.

"Suffocated" by Laudanum.

On March 22 an inquiry was held at the St. Clement Danes' Vestry Hall, Strand, concerning the death of James Joseph Lovibond (33), pharmaceutical chemist, 56 Gellatly Road, Nunhead, who was found dead on the Thames Embankment. The widow stated that deceased had been suffering from bronchitis, and was looking forward to two days' holiday at Easter when he was going to stay in bed. He had been troubled with his breathing, but refused to see a doctor because he was afraid he would have to lay up, which would be inconvenient to his employer. Mr. E. James Tucker, a chemist's manager, of 203 Whitecross Street, City, said he was deceased's employer. On the morning of his death deceased appeared so very poorly that witness advised him to go home. He was in a dazed condition, but did not seem to realise that he was so ill, and while putting on his hat and coat he remarked that he did not know why he was being sent home. Witness expressed a hope that he would be able to come to business the next morning, and the deceased replied, "Do you really wish me to come to-morrow?" Witness answered, "Of course I do." A police-constable deposed to finding deceased apparently asleep on a seat on the Victoria Embankment. He asked him to move on, which he did, but twenty minutes later witness again came across deceased, who was then unconscious. The constable removed him to King's College Hospital, where life was pronounced extinct. A number of articles were found in his pockets, but no bottle or phial. Mr. Percy Cooper Collins, house-physician at the hospital, said a *post-mortem* examination revealed that all the organs were healthy with the exception of the lungs, which showed signs of bronchitis of some standing. There was also recent bronchitis, the result of the inhalation of some irritant, the nature of which he could not determine. The cause of death was suffocation, consequent upon vomiting laudanum. The stomach smelled strongly of opium and contained little or no food. Mr. Tucker, re-called, said deceased might have been under the influence of opium when he left the shop, but he did not suspect it. He had known him to take bismuth, but not opium. Mrs. Lovibond said her husband was not in fear of losing his situation, but Mr. Tucker being an invalid he did not wish to discommode him. The Coroner commented on the extraordinary nature of the case, and said he was unable to ascertain what the deceased was doing in the fourteen hours preceding his death. The jury returned a verdict to the effect that the deceased was suffocated by laudanum, but how it came to be taken there was not sufficient evidence to show.

Chemists as Overseers.

The following gentlemen have been appointed Overseers for the ensuing year:—

Cromer.—Mr. Daniel Davison, chemist.

Exeter.—Mr. David Reid, Queen Street; Mr. James Town-

send, chemists' printer, Gandy Street; Mr. P. F. Rowsell, High Street; Mr. F. S. Joint, South Street.

Ipswich.—Mr. Arthur Pain, chemist, Cornhill, and Mr. P. Cornell, chemist, Tavern Street.

Eleven Ounces at One Dose.

An inquiry was held at Luton on March 27 concerning the death of a domestic servant named Pitchford. The girl had been an out-patient at a London hospital for an affection of the throat and nose, and on the occasion of her last visit she had received a sufficient supply of medicine to last her one month. Each bottle (holding 12 oz.) contained twenty-four doses, and deceased for some reason appears to have taken the whole of the contents of the bottle except 1 oz. The mixture contained strychnine ($\frac{3}{4}$ gr. in each bottle), and death occurred from strychnine-poisoning.

Cowper Committed.

John Cowper, better known to the drug-trade as J. Islip again appeared before the West London Police Court on April 3 on various charges of obtaining goods by false representations. After considerable evidence had been given prisoner was committed for trial.

Disinfecting the Mains.

A paper, by Dr. G. S. Woodhead and Mr. W. J. Pare, was read at the Royal United Service Institution on April 2, which described how, by means of tons of chloride of lime and a fire-engine, the water-mains and hose-pipes of Maidstone were washed out after the recent epidemic. Apart from slight damage to washers' clothing and pump-buckets, no ill-effect of any kind was traceable to the chlorinated-lime solution.

Chlorodyne for Children.

At an inquiry held at Spennymoor on March 21, touching the death of a child 2 years of age, the father stated that deceased was suffering from a severe cold, and had been given a dose of chlorodyne. The child died the next day.

Carbolic Fatalities

At an inquest held at Willesden on March 23, on the body of Frederick Joseph Corbesley, a carpenter, the cause of death was attributed to carbolic-acid poisoning. In reply to the foreman of the jury the Coroner (Dr. Gordon Hogg) said any child could buy carbolic acid. It was the most commonly used poison he, as Coroner, came across.

A young woman, unidentified, was found on March 29 lying unconscious in Firs Lane, Winchmore Hill. Some distance away was a pint bottle, labelled "Champion's Vinegar," which was found to contain carbolic acid. Dr. Jackson was called, but found that nothing could be done to save the woman, who died shortly afterwards.

Yew-poisoning.

On March 20, at an inquest held at the Somerset County Asylum on the body of a male patient named Godfrey, the evidences showed that deceased suddenly became ill while working on the lawn, and died in a short time. A *post-mortem* discovered small hæmorrhages all over the walls of the stomach, which contained undigested food and several yew-leaves. The intestines also contained broken pieces of yew-leaves and a needle, and death was attributed to yew-poisoning.

Fire.

The premises of Messrs. Jones & Sons, chemists and mineral-water manufacturers, Northampton, narrowly escaped destruction by fire on March 26. Fire broke out at the rear of the building, close to where a large quantity of chemicals was stored, but the outbreak was subdued before serious damage was done.

A Joint Outing.

The Plymouth, Devonport, Stonehouse, and District Chemists' Association has received from the Exeter Association a suggestion that a joint summer-outing should be arranged, and it is probable that the suggestion will be acted upon.

Liverpool and the Companies.

The Liverpool public is amused just now by correspondence on the company-question, in which Mr. Boot is supplied with things to reply to, and does it.

North London Chemists' Meeting.

A meeting of the chemists of Hackney, Islington, St. Pancras, Hampstead, and adjoining divisions, will be held at the Old Cock Tavern, Highbury, on Wednesday afternoon next, April 11, at 3 o'clock; entrance by saloon-door (near Highbury Station doors). The meeting will be in easy, conversational style. Agenda: To discuss the subject of defence against vexatious prosecutions, insurance against risks in selling medicine, and (if time permit) any other business brought forward. The Chairman, Secretary, &c., of the Chemists' Defence Association are expected to be present. [NOTE.—Only registered chemists are invited.]

The Medicine-man's Ruse.

At Bridgwater County Sessions on March 29, Alfred White, described as a "medicine-man," was charged with obtaining 9s. 9d. from Walter Cook, with intent to cheat and defraud. Prosecutor was ill, and accused went to his house and stated that he could mix him some medicine for 4d. which would cure him. He left ostensibly to procure the medicine, but returned shortly after stating that he had to make up a bottle of medicine for a neighbour, and obtained 9s. 9d. on the representation that the neighbour in question wanted change for half a sovereign. He did not return, and was committed for trial.

More Work, Less Fee.

As the Board of Agriculture has requested Penzance Town Council to increase the number of samples of food and drugs taken in the Borough for analysis, the Corporation has asked the Public Analyst (Mr. Sandford) if he is prepared to reduce his fee for analyses from one guinea to half a guinea per sample.

Royal Institution.

At the meeting held on April 2 special thanks were voted to Mrs West and Mrs. F. Colenso for their present of a portrait of their father, the late Sir Edward Frankland, who was Professor of Chemistry at the Institution from 1833 to 1868.

A Veterinary Colic-draught.

On March 26 a Salisbury coal-merchant, named Cookman, committed suicide in a Paddington hotel by drinking a mixture of spirit of turpentine and tincture of opium, which he used for his horses.

Prussic-acid Poisoning.

An inquest was held at Manchester on March 30, touching the death of Thomas Hart, pharmaceutical chemist, 56 Ducie Street, Chorlton-on-Medlock, where he was manager of a shop belonging to Mr. Wm. Pare, wholesale druggist, Bolton. The widow deposed that deceased was found lying on the bathroom-floor, and on a table in the bathroom was a bottle (produced) labelled "Hydrocyanic Acid—Poison." Her husband had lately complained that the shop was not doing well, and he was rather depressed. The medical evidence showed that deceased had died from hydrocyanic-acid poisoning, and a verdict to that effect was returned.

Midwives Bill.

A meeting of the medical men of South-East London was held at the Cannon Street Hotel, E.C., on April 4, to protest against the Midwives Bill. Mr. George Brown was in the chair, and about two hundred medical men were present. Mr. Brown first pointed out the object of the meeting, and the Secretary read letters from M.P.'s who were unable to be present. One M.P. objected to the place of meeting—it should have been at the Westminster Palace Hotel. Dr. Glover wrote that the Medical Council direct representatives (he is one) should have been consulted before the meeting was called. The Chairman called upon Dr. Parke to propose a resolution expressing strong disapproval of the Bill. Dr. Parke said the Bill should have included men. Many doctors would find an unqualified assistant useful in midwifery cases. Dr. Toogood seconded the resolution, characterising the Bill as a

"genuine fraud." The Bill would not benefit the class of women it was apparently intended for, but would take away from medical men patients who were able to pay. He thought Mr. Atherley-Jones's remarks about the medical profession were most ungentlemanly and uncalled for. (Hear, hear.) Dr. Watt suggested some verbal amendments of the resolution, which were approved of, and said he had worked it out and found that at present every woman in the kingdom could have a qualified medical man if she desired. He appealed to the meeting, not as medical practitioners, but as men, not to allow ignorant attendance at the period when the nation was being born. Mr. H. W. Forster, M.P., said he came to get information on the subject. His own ideal, formed after consultation with his wife, was that every woman should be able to have at her confinement a qualified nurse working under a medical man. He pointed out that the qualifications of the registered persons had yet to be settled by a specially-appointed board, and they were hardly correct in assuming that the women would be ignorant. Mr. John Penn, M.P., said when the Bill was before the House they were told that it had the approval of the General Medical Council and the Colleges of Physicians and Surgeons—a fact which carried great weight with the members of the House. (Cries of "They do not represent us," "They are close corporations," "We have only three representatives on the General Medical Council.") Mr. Penn said he understood from these remarks that the general practitioners were against the Bill. (Yes, yes.) Dr. Merrill (Mayor of Harrogate) said the bodies mentioned did not represent the rank-and-file of the profession. He was entirely against the Bill on principle: it would be a distinctly retrograde step, and a grave danger to the community. Dr. Macnaughton-Jones, in a very vigorous speech, pointed out the danger of the Bill. How were they to define "natural labour"? He defied any medical man in that room to say whether a case was going to be normal before it came off. The British Gynecological Society, of which he was President, had memorialised the General Medical Council, and the answer the Society got made it difficult to understand why the Council approved of the Bill. It was a monstrous proposal, and was going back to the time (the eighteenth century) before man-midwives began to practise. The resolution was carried unanimously.

Technical Education Appointments.

Mr. T. S. Dymond, F.I.C., has been reappointed by the Essex County Council, staff instructor in chemistry at a salary of 400*l.* per annum, with Mr. F. Hughes as assistant, at a salary of 175*l.* Mr. D. Houston has received the appointment of instructor in biology, at 400*l.* per annum. At the same meeting grants were made of 100*l.* for apparatus for a biological and physiological course at Bigod's School, Dunmow.

Nottingham Notes.

There is a scarcity of junior assistants in Nottingham, and chemists are experiencing great difficulty in obtaining the services of young men.

The examinations in connection with the Nottingham and Notts Chemists' Association have just taken place, and the results have come out very satisfactorily. Mr. A. W. Leeming has won the first prize for materia medica.

Drug-contracts and the Budget.

At the meeting of the Holborn Board of Guardians on April 4, Mr. Geo. Eade, on behalf of the Dispensary Committee, moved: "That, owing to the increase in duty on spirits, the following additions to the contract-prices for alcoholic preparations be allowed to be charged by Messrs. Corbyn, Stacey & Co. (Limited) in respect of their contract for drugs, as from the date of the imposition of the duty, in accordance with their application, dated March 9, 1900, viz.: Chloroform and ether, 3*l.* per lb.; spirit æther. nitros., 2*l.* per lb.; proof-spirit preparations, 1*l.* per lb. rectified-spirit preparations, 1½*l.* per lb.; chloral hydrate, 1*l.* per lb." This was agreed to without discussion.

The Price of a Dispenser.

The Holborn Board of Guardians on April 4 had before them a question of appointing a temporary dispenser. The gentleman appointed had asked 10*s.* per day, and one of the members thought this a large sum. The Chairman of the

Board (Mr. Enos Howes, J.P.) said it was a favour to get a gentleman to act temporarily; and when members considered the cost of properly educating a dispenser they surely would not say that 3*l.* a week was excessive pay. (Hear, hear.)

Irish News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

The Queen's Bouquets.

Miss May Robinson, daughter of Mr. T. W. Robinson, M.P.S.I., presented the Queen with a lovely bouquet on her arrival at Kingstown on Wednesday. Messrs. J. Leonard & Co., 19 North Earl Street, Dublin, had ready for the Queen's visit a new perfume, called "The Queen's Royal Irish Bouquet."

Flax-seed.

The first act of the new Irish Department of Agriculture and Industries, which came into legal existence on April 1, has been to issue a request to flax-growers throughout the country to submit samples of flax-seed in connection with an inquiry which the Department is about to institute into the flax-industry.

Personal.

Dr. Ninian Falkiner, Examiner to the Pharmaceutical Society of Ireland, and formerly of Messrs. Hamilton & Long's Pharmacy, Dublin, has been appointed by the Lord Lieutenant to the position of medical superintendent in the Registrar-General's office, at a salary of 700*l.* a year. He has in consequence resigned his connection with the Grand Canal Street Dispensary, Dublin.

Must Accept the Lowest Tender.

The Local Government Board have written to the Omagh Poor-law Guardians stating that they cannot regard as sufficient the Guardians' reason for their action in accepting the tender of Messrs. Lyons, of Omagh, for the supply of medicines, and that unless they had grounds for believing the firm which tendered at the lowest price would not perform their contract satisfactorily the matter would have to be reconsidered, and the question of allowing recoupment gone into. The Guardians held that the convenience of having a local man as their contractor outweighed all other considerations.

Contracts.

The Cork Medical and Drug Company have been declared contractors for the supplies of medicines and medical appliances for the Macroom Union.

The Cork Chemical and Drug Company have been declared contractors for the supply of medicines to the Cork Workhouse and dispensaries of the Cork Union for the ensuing half-year.

Messrs. James Nethery, Dungannon, and John Clarke & Co., Belfast, have been declared contractors to the Cocks-town Union for the supply of medicines and surgical appliances, respectively.

Messrs. Hunt & Co., Westland Row, Dublin, and the Medical Requisite Company, Cork, have been appointed contractors to the Waterford Union for the supply of medicines and medical requisites, respectively, at 10 per cent. off the scheduled price-lists.

At a meeting of the Strokestown (co. Roscommon) Union, held on March 23, Mr. White, Sligo, came before the Board and said that, as his tender was not in before 12 o'clock, he would, if there were any persons lower than he was, reduce his tender. On opening the envelopes it was found that Mr. Hartnett, Castlereagh, had tendered at 12½ per cent. below list-price, whilst Mr. White's was only 5 per cent. off the list. Mr. White thereupon said he would amend his tender to 15 per cent. The Chairman thought it was unfair to allow Mr. White to do this, and proposed that Mr. Hartnett be appointed contractor; but when the vote was put Mr. White obtained the contract. Messrs. Boileau & Boyd, Dublin, were appointed contractors for surgical instruments, at 25 per cent. off list-price. Messrs. Clarke & Co. tendered at 17½ per cent. off.

Scotch News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Personal.

Mr. David Lister, chemist and druggist, has been elected a member of the Dalmeny School Board.

Mr. Alexander Noble, chemist and druggist, has been elected to the Galashiels School Board.

Mr. John Harvie, chemist and druggist, Airdrie, has been returned for the fifth time as a member of the local School Board.

Drank the Solution.

A Montrose shoemaker named Lauchlan Murray, on April 1, drank a quantity of patching-solution (rubber dissolved in bisulphide of carbon), and died in spite of all the efforts of the medical man who was summoned.

Business Change.

Mr. W. C. Gowans, chemist and druggist, late of Colombo, has acquired the old-established Apothecaries' Hall in Bothwell, which he intends to reconstruct and refit.

Glasgow International Exhibition.

It is officially notified that all applications for space at this exhibition, which is to be opened in May, 1901, must be lodged not later than June 1 with the General Manager, Mr. H. A. Hedley, 33 St. Vincent Place, Glasgow. There are in all eight classes, embracing agriculture, mining, industrial design and manufactures, machinery and labour-saving appliances in motion, locomotion and transport, marine engineering and shipbuilding, lighting and heating, science, education, music, sports and sporting-appliances. Separate sections will be devoted to women's exhibits, archaeology, and fine art.

Coldly Received.

The perils of the apprentice are evidently not confined (especially in Scotland) to partial or permanent disfigurement arising from an immature acquaintance with chemical reactions. Even in strictly commercial transactions there are dangers, as Duncan Mearns Durno, apprentice-chemist of Aberdeen, has discovered. Duncan was sent by his master to collect payment for a box of pink pills from Mrs. Margaret Smith, of Clayhills. Margaret threw cold water (from a jug) over Duncan and his suggestion, alleging at the police court where the parties subsequently appeared that it was Duncan's bad language which provoked her matronly ire. The Bailie mulcted Margaret in three half-crowns; failing that, three days in gaol.

Scotch Pharmacy Forty Years Ago.

Mr. David McLaren, the genial President of the Edinburgh Chemists' Association, gave his fellow-members some interesting reminiscences, from which, we think, we ought to cull more than was given in our telegraphic report of last week, especially as this is the end-of-the-century year, and Mr. McLaren's knowledge of the drug-trade in Scotland is extensive and peculiar. His apprenticeship began in March, 1859, and it was the regular apprenticeship of a Scotch country druggist—half pupil, half errand-boy, a bit of everything, with half-a-crown a week to begin with. He liked it; it did him good commercially, intellectually, and technically, and, looking back over the intervening years, he thought it was just what he would like if he were to begin again. These were, he said, the merry days. Even entrance into the sacred realms of the Pharmaceutical Society and obtaining the style and title of pharmaceutical chemist was like going to a reception. The late Mr. Richard Raimes, when in one of his more humorous moods, used to tell of how he was admitted. At one end of a large room stood the examiner, and at the other the examinee. The former held in one hand a bladder of lard, and in the other a bath-brick. The question was put which was which, and if answered correctly the candidate was admitted on payment of his entrance-fees, and in due course received his diploma. There were no

female aspirants in those days. It was a genteel profession. Ministers, teachers, and others of like pursuits, when they had failed to prosper in their own sphere, took to selling and compounding drugs. In March, 1863, Mr. McLaren went to Edinburgh, and at once got into touch with the members of the Wilsonian Association, which had as its honorary President the late Professor Archer, of the Museum of Science and Art, and among its first presidents Mr. James Mackenzie, Forrest Road. There were still others remaining in town who at that early date took an active part in its affairs. He remembered the first edition of the British Pharmacopœia, and the many meetings held to discuss its merits and demerits. He attended the meetings in the Bible Society's rooms, and was now convinced that there was much talk and little wisdom. How did the drug-trade stand in Edinburgh forty or fifty years ago? From an Edinburgh directory, 1849-50, he found that at that date there were in that city and in Leith forty-nine apothecaries. The name chemist and druggist was not then in vogue. That was to say that between doctors and chemists or druggists there were forty-nine open shops. The only names he had been able to identify in the directory of that date were Baildon, 73 Princes Street; Duncan, Flockhart & Co., 52 North Bridge and 139 Princes Street; Duncan, Flockhart & Powell, 18 Bernard Street, Leith; J. F. Macfarlan & Co., 17 North Bridge; John Mackay, 121 George Street (now John Mackay & Co., Canning Street); Raimes & Co., Smith's Place; Robertson & Watson (now James Robertson & Co.), 35 George Street; and Lindsay & Shaw (now Lindsay & Gilmour), 11 Elm Row. With these exceptions all the others, even in name, had ceased to exist. There was at that time, and still is in the city, a firm of manufacturing chemists, who, though in business prior to 1849, and for ten or twelve years thereafter, were not in the opinion of the framers of the directory considered worthy to be placed on the list of apothecaries. The firm of T. & H. Smith & Co., to whom he referred, were then designated "surgeons and druggists and manufacturers of aerated waters." The only one who still lived, and was in business at that date known to him was James Robertson Young, who, in 1849, was a druggist at 39 St. Leonard Street. In 1860-61 the number of chemists had increased to 53, 1859-70 to 87, 1880-81 to 109, till in 1898-99 the number of separate places of business had increased, to 159.

French News.

(From our Paris Correspondent.)

THE INTERNATIONAL PHARMACY CONGRESS AT PARIS.—Owing to a printer's error the dates September 2 to 8, 1900, have been printed on the forms of adhesion which members of the Congress are asked to sign. In order that there may be no misunderstanding I have communicated with the General Secretary on the subject, who informs me that the dates of the Congress remain August 2 to 8, as already mentioned in the *C. & D.*

THE PHYSICIAN AND THE PHARMACIST.—A decision has been given in the matter of the action for damages brought by a Paris doctor against a pharmacist, owing to a dispensing error, of which details were given in last week's *C. & D.* The doctor took a dose of medicine dispensed from a prescription given by him in order to encourage a lady client, and when he found that it made him ill, hastened to claim compensation. The doctor asked for 5,000*f.* damages, and has been awarded 500*f.* The Judge decided that there had been an error on the part of the assistant, and that the pharmacist was responsible, but, on the other hand, the physician had placed himself partly in the wrong, in the first place by writing his prescription in pencil in a somewhat illegible way, and in the second, by not having sufficiently reflected before absorbing a dose of the medicine which had indisposed his client after taking some of it.

DEATH OF M. JOSEPH BERTRAND.—French science has sustained a great loss by the death of M. Bertrand, who, acted, with M. Berthelot, as perpetual Secretary of the Paris Academy of Sciences. He was born on March 11, 1822, and was thus a little more than 78 years of age. His leading, written works consist of criticisms of *Alembert*, the *Chemist*

Lavoisier, &c., but it was principally as a mathematician that Bertrand excelled and has left his mark on the nineteenth century. At the age of 20 he was the victim of a railway accident when returning from Versailles, and had the bone of his nose broken, which seriously disfigured him for life. He showed remarkable heroism on that occasion by rescuing his brother, who had a broken leg, from the wrecked train.—The death is also announced of M. Beaugregard, Professor of Cryptogamy at the Paris School of Pharmacy. He was born at Havre in 1851, and was a doctor of medicine and of sciences, as well as a pharmacien de 1^{re} classe.

Colonial and Foreign News.

ABANDONED.—It is reported that the proposed excursion of the members of the New York section of the Society of Chemical Industry to London and Paris during the Exposition has been given up owing to the difficulty of obtaining steamship accommodation.

CAUCASIAN OTTO.—The analysis of the oil of roses obtained from rose-bushes transplanted from Kazanlik to Kachetien (Tiflis) has proved that it is not only equal, but even superior, to the Bulgarian variety. More plants have been obtained, and it is intended to lay out whole plantations of rose-trees.

WAS IT FOR ASTHMA?—In Russia the Government recently suppressed the sale of a very popular nostrum, paraded as a great vegetable remedy, called *Ephedra vulgaris*. Owing to its botanical title it had escaped the vigilance of the officers for a while, but finally it was discovered to be hay, "only that and nothing, nothing more." The remedy found a ready sale at \$1.50 to \$2.50 per pound package.

TARIFF DECISIONS.—The following are recent interpretations of the Customs and Excise Duties Acts published in the New Zealand *Gazette*:—Bromidia (as proprietary medicines), 40 per cent. *ad val.*; seecotine (as glue), 1½d. per lb.; thialion (as proprietary medicines), 40 per cent. *ad val.*; filter-papers (as druggists' sundries), 20 per cent. *ad val.*; chemical fire-engines, free; bottles, wickered, used with sparklets for aerated waters (as glassware), 20 per cent. *ad val.*

A NEW TANNING-AGENT.—The Indian *Capital* reports that experiments are being made with a new tanning-agent obtained from the pods of the *tara* or *teri* shrubs of Burma, Chittagong, and Assam; and great superiority is claimed for the new tanning-substance over divi-divi and the numerous other agents now in use. Experiments conducted at the Bristol Tanners' Laboratory showed that 33 per cent. of tannic acid could be obtained from the pods of the tara, and it was subsequently found that 50 per cent., and even 60 per cent., could be extracted.

TO EVADE CONSCRIPTION.—The trial of Dr. Ziel and others for attempting to evade the conscription laws (*C. & D.*, March 24, page 496) ended on April 2 at Elberfeld. Dr. Ziel was convicted of supplying medicines to various young men with the intention of temporarily unfitting them for military service, and was sentenced to ten months' imprisonment. The chemist who compounded his prescriptions was sent to prison for nine months, and the others for various shorter terms. The prisoners have already been in confinement for nearly a year.

COMMERCIAL PROGRESS IN SIAM.—According to Reuters agent at Bangkok, Germany and Denmark have both advanced to practically first rank in trade with Siam. Almost 80 per cent. of the shipping of the port has hitherto been British, but within the last six months nearly the whole of the British shipping has passed under the German flag, that country having bought out the two chief lines of steamers. Apart from the sale of the ships, British interests in the country have simply remained stationary. But Siam is progressing very steadily, and there are ever new openings for the investment of capital, which are being taken up by the Danes and Germans. We are afraid that Siam is almost a sealed book to British traders, but we know for a fact that there is a large drug-business to be done with the hospitals and doctors' dispensaries in Bangkok.

Australasian News.

Chiefly from "The Chemist and Druggist of Australasia," February 1, 1900; 6d. per copy, post free.

NOT THE REAL CONDY.—At Melbourne on February 15, Condy & Mitchell (Limited) got an order to restrain Mr. H. J. Mau, chemist, Carlton, from applying the designation Condy's fluid or liquid to solution of permanganate of potash. An injunction has also been obtained against Mr. J. C. Jones, chemist, Richmond, Victoria, for selling permanganate of potash as Condy's crystals.

PHARMACY CERTIFICATES.—The *C.D.A.*, in its February issue, reproduces eight certificates of various pharmaceutical authorities in Australasia. The certificate of the Pharmaceutical Society of New South Wales takes the palm for beauty of design. The certificate of the Registered Pharmacists' Society bears a striking resemblance to the diplomas granted to pharmaceutical chemists in Great Britain, Avicenna and Galen being replaced by figures allegorical of Great Britain and the colony.

A MILK-LABORATORY for the supply of milk for infants not merely free from bacteria, but also with the proper proportions of fat, milk, sugar, proteine, and lime-water included, and modified to suit different patients, has been established in Melbourne by Mr. Charles E. Towle, of Ogg & Co., one of the oldest-established pharmacies there. Elaborate precautions are taken to deliver the milk to the patient in the best possible condition, and a charge of half-a-guinea per week is made for the supply. Details of the practical working are given in *The Chemist and Druggist of Australasia* of February.

A CHLORODYNE-CUSTOMER.—During the evidence at a murder-trial at Dunedin, N.Z., it transpired that the murdered woman was a victim to the chlorodyne-habit. Mr. Wardrop, chemist, South Dunedin, stated that the woman, Mrs. Gallaway, had consumed latterly eight 11s. bottles of chlorodyne per month. Mr. Wardrop, in reply to the Crown Prosecutor as to whether the morphine-habit was prevalent in the city, said that nearly every chemist had one or more of these customers, but they did their best to get the victims to give up the habit. Over three hundred 11s. size Collis Browne's chlorodyne bottles were found by the police on the premises.

PATRIOTIC WINDOW-DISPLAY.—A suggestion given by Mr. M. J. Arnesen in the *C.D.A.* would be appropriate for chemists in the Mother Country just now. Mr. Arnesen suggests a sort of chemical Union Jack for the window. A space on the inclined base of the window-enclosure of the size desired is edged with strong brown paper, and the pattern of the flag outlined in strips of cardboard. The white portions are carefully filled with such substances as starch, boric acid, or alum, the blue parts with copper sulphate, indigo, or ultramarine, and the red portions with potassium bichromate or Venetian red. The various chemicals could be labelled, and an inscription such as "The Flag we Trade Under" placed over all.

THE PHARMACY AND POISONS ACT of Western Australia has now been definitely amended and materially strengthened. The price pharmacists have had to pay for this advantage is not great, as a comparatively small number of legally-qualified chemists in other Australasian colonies had established themselves in Western Australia. Those who had been three months resident in the colony before the passing of the Act are now granted registration, but the door is closed against others. The titles-section of the Act has been strengthened, as unregistered persons are now prohibited from using any name, sign, letters, or inscription containing the words, "medical," "apothecaries," "drugs," or "druggists," alone, or in conjunction with any other words suggesting that the business of a chemist and druggist is carried on. This in addition to a prohibition of the use of the words "chemist," "druggist," "pharmacist," and a long string of similar words as set forth by the original Act. The Poisons Schedule has been considerably extended, the most striking feature being that soothing-powders and soothing-syrups are placed in the second part of the schedule. This was done by the people's representatives in Parliament, not by pharmacists.

Personalities.

MR. JOHN PARRY, chemist, Hay (Breconshire), has been elected a member of the Rural District Council.

MR. J. S. BATTLE (Battle, Son & Maltby, chemists, Lincoln) has been re-elected a director of the Lincoln Wagon and Engine Company.

MR. W. SMITHETT, of Messrs. Wilson, Smithett & Co., tea, cinchona, and spice brokers, 21 Mincing Lane, E.C., is at present on a visit to Ceylon.

MR. T. P. GOSTLING, of Messrs. Gostling & Co., chemists, Diss, has been appointed overseer of the Diss Urban District Council for the ensuing year.

MR. F. GUTTRIDGE, chemist and druggist (Kent), has been elected a member of the newly-formed Chamber of Commerce for Ashford and district.

MR. R. L. GRIFFITHS, chemist and druggist and sub-postmaster, Hadlow (Kent), has been elected a member of the Committee of the Kent Branch of the National Federation of Sub-postmasters.

DR. HEINRICH SALZMANN, who has conducted the *Apotheker Zeitung* since May 1, 1896, resigned on March 31, when Herr Lorenz Zumbroich succeeded him, and also took over the business management of the German Pharmaceutical Society (*Apotheker Verein*) to which our contemporary belongs.

COUNCILLOR FREDERICK BIRD, chemist and druggist, Coventry, is the subject of an eulogistic character-sketch in a recent issue of the *Coventry Reporter*. Councillor Bird has been in business in Spon Street for nearly forty years, and has taken an active part in the public affairs of the town since 1867.

MR. ALDERMAN WALTER VAUGHAN MORGAN, one of the proprietors of this journal and treasurer of Christ's Hospital, who has been during the past two years prevented by illness from undertaking the duties of Sheriff of the City of London, has now recovered, and will offer himself for election on Midsummer Day next.

MR. ARTHUR BRAND CHATER, the Queenslander who is making our pharmaceutical authorities sit up on the question of reciprocity, is a Minor man, and was at one time on Messrs. Southall Brothers & Barclay's staff in Birmingham.

He is in business in Brisbane, is a member of the Board of Pharmacy, an analytical chemist of repute, and has been an advisor to his colonial Government on technical matters. He is a whole-hearted pharmaceutical reciprocity, and came home on his present visit with instructions from his Board to make the "parent Society" see its duty in this matter. In a letter which he addressed to members of the Pharmaceutical Council the matter is put tersely, thus:—

It is more to the benefit of the British pharmacists to gain this object than it is to the colonial pharmacist, for many

British chemists settle in Australia and few Australian chemists settle in Great Britain. In regard to this our Board say: "By the Pharmacy Act of 1884 the diploma of the Pharmaceutical Society of Great Britain is accepted in this colony, and we would deprecate any alteration of law in this respect: but as the compulsory acceptance of British certificates has been omitted from some recent colonial Acts, this course would eventually have to be adopted if the claims of colonial chemists receive no recognition." New South Wales, on the basis of its last Pharmacy Act, refuses to accept the Minor certificate of Great Britain. The medical profession accept the diplomas of Sydney and Melbourne colleges. We look to the parent Society to take the initiative in this great object, and feel that it will not lose this opportunity to acquire the necessary power to reciprocate,

for who can deny that at this time, when the colonies have shown in the present struggle in South Africa that they are ready to join hands with the Mother Country in her troubles, there should be a union of British pharmacists throughout the English-speaking world? I emphasise that the time is opportune; in fact, I have before me now a letter from my Agent-General, in which he says: "If the executive body—the Pharmaceutical Society of Great Britain—will pass a resolution that it is desirable to acquire the right to accept diplomas of those colonies who have equal standards of qualification, he is certain that, after being endorsed by all the Agents-General of the colonies, the Colonial Department would move at once."

Mr. Chater has now secured the sympathy of the Council with his object, and a scheme of pharmaceutical reciprocity between the Mother Country and her colonies can no longer be considered Utopian.

War Notes.

TRANSVAAL AND O.F.S. SUBSCRIBERS.—Any subscribers of *THE CHEMIST AND DRUGGIST* whose places of business were in the Transvaal and Orange Free State, and who have not received their copies since the war broke out, are requested to send their names and addresses to the Publisher, 42 Cannon Street, London, E.C. We have reserved their copies of *THE CHEMIST AND DRUGGIST* and copies of the *DIARY*, and these we shall send to them as soon as they inform us of their addresses. This note also applies to subscribers in beleaguered towns in other parts of South Africa whose supply of *THE CHEMIST AND DRUGGIST* has been stopped by the Post Office owing to the war.

OUR KIMBERLEY CORRESPONDENT, writing on March 14, says:—One of the first to congratulate the chemists of Kimberley on the siege being raised was the Editor of the *C. & D.*, through your worthy representative in Cape Town, and I need not say was duly appreciated by us. Your correspondent had previously sent two tele-heliographic messages, but the pressure on the military operators was so great that several weeks elapsed before delivery. The chemists of Kimberley rose nobly to the occasion, Mr. Gasson and Mr. Ruffel being in the Town Guard and Mr. McBeath in the Red-cross Section. The remaining men had their hands full of dispensing, &c., owing to the prevalence of sickness among a greatly-increased population, the people from the neighbouring towns and villages having "rushed" into Kimberley for safety. Shells fell in close proximity to several pharmacies, but happily all escaped uninjured except Mr. Ruffel's at De Beers, which was struck by a splinter from a 100-pounder. Our stocks of drugs and chemicals held out (with mutual assistance) to the end of the siege, but sundries and patents got short after the first two months. The tea-tabloids were in great demand; they make a delicious cup of tea, and many of our people will always use them henceforth. When our sugar-supply became short (2 oz. per diem) the saccharin-tabloids were much appreciated. The soup-kitchen was a great success. The idea originated with a *confrère*, Mr. McBeath, and Mr. Rhodes at once promised to supply vegetables free from his gardens at Kenilworth. This is but one of the many blessings which Mr. Rhodes rendered to the besieged town. Colonel Kekewich and his able staff performed their duty as only true British officers can, and I am sure their names will be remembered with gratitude by the people of Kimberley for many years to come.

DISPENSER AND PUBLISHER.—The banishment of Cronje, to St. Helena has led the *Star* to investigate the resources of the island, and amongst its discoveries is the fact that the only newspaper in the island—the *St. Helena Guardian*—is printed in Napoleon Street, and published at Mrs. George's dispensary in Jamestown.



MR. A. B. CHATER.

Business Changes.

Notices are inserted free in this section if properly authenticated.

LEE'S CASH DRUG-STORES have opened a business at Broad Street, Teddington.

MR. JAMES KERSHAW, chemist and druggist, has opened a pharmacy in Milkstone Road, Rockdale.

MR. F. C. FRANCIS, chemist and dentist, has opened a pharmacy at 2 The Pavement, Ladywell, S.E.

MR. E. D. MAY, chemist and druggist, has opened a new chemist's business at 6 Market Terrace, Philip Lane, West Green, N.

MR. CHARLES WASS, chemist and druggist, Spalding, has purchased the old-established business in High Street, Holbeach, lately carried on by Mr. J. Best, who is retiring.

MR. J. S. SHEARMAN, chemist, 156 King Street, Yarmouth, has purchased the prescription-books and private recipes of Mr. Wyles, pharmaceutical chemist, who until recently carried on business at Kimberley Terrace.

MR. E. HERBERT MORRIS, chemist and druggist, has purchased the old-established business carried on at St. James's Square, Newport, Isle of Wight, by the late Mr. Robert Smith. The business will be continued under the style of R. Smith & Co.

MR. GEORGE N. M. BIRKETT, M.A., M.P.S. (son of Mr. Charles Birkett, chemist, for thirty years in business in Bowness-on-Windermere), has purchased the business of Mr. Farrer Rigg, of Kendal. He has been with Messrs. Symcs & Co., Liverpool, recently.

MESSRS. PARKE, DAVIS & Co.'s London branch has been removed from 21 North Audley Street, W., to 111 Queen Victoria Street, E.C. The new premises are extensive, and provide good warehousing as well as office accommodation. The new telephone number is 5,940 Bank.

THE MAYPOLE COMPANY (1899) (LIMITED), 17 Cumming Street, King's Cross, N., have taken over the business and stock of the Star Perfumery Company, and have secured the services of Mr. R. W. Pritchard (late Manager of the Star Perfumery Company), who has been appointed the business manager of the Maypole Company (1899) (Limited). The whole of the business will in future be carried on at 17 Cumming Street.

Trade Notes.

A PRIZE OF 2*l.* is offered in our supplement this week for a design for a medicated-wine label.

IN CASE OF ACCIDENT.—MESSRS. J. J. Findlay & Co., surgical-dressings manufacturers, 96 Bath Street, Glasgow, are putting before the trade a pocket ambulance-outfit, to sell at 1*s.* The tin-box receptacle contains a quantity of blue antiseptic gauze, a quantity of wood-wool tissue, bandages provided with safety-pins, and a roll of adhesive plaster.

THE YORK GLASS COMPANY (LIMITED) send us a copy of their illustrated catalogue for 1900. The new additions to the firm's list are their serrated poison bottle, which we had occasion to favourably notice some time back, an effective ribbed bottle for holding poisonous preparations, several new forms of graduated measures with imperial and metric graduations, and wide-mouth emulsion bottles. The catalogue is well printed, and gives in an appendix a list of scheduled poisons with regulations for their sale and storage.

FUMIGATION AND DISINFECTION.—The latest appliances introduced by the Sanitas Company (Limited), Bethnal Green, E., known as "Formic-Sulphugators," are likely to afford a reliable and sure means of disinfection after cases of infectious illness. The Formic-Sulphugators are in two sizes, the smaller consisting of a double tin—the inner one surrounds a sulphur candle, while the outer tin contains a mixture of para-formaldehyde and an inert material. Before use water (or a solution of formaldehyde) is poured on the

top of this material until no longer absorbed, and the candle is lighted. The heat generates a current of formaldehyde vapour in association with steam and sulphur dioxide. A larger—and, we think, better—type is made of three combined tins. The inner one (provided with a lid) contains a preparation of para-formaldehyde, which is vaporised by the heat of a burning sulphur candle in the second tin. In the outer vessel water or formaldehyde solution is poured. A tube from the central tin to the outside cover carries the fumes of formaldehyde vapour in a concentrated form to the air. In this case, sulphur-dioxide gas is generated in association with vapour of para-formaldehyde and steam, or, if formaldehyde solution is used, that disinfectant is likewise vaporised at the same time.

College Notes.

MR. HUGH JONES, of Llanfairfechan, who has been for the past six months a student at the Manchester College of Pharmacy, died on March 31 from rheumatic fever, after a week's painful illness. He had gone home for a few days' rest at the half-term, and probably caught cold on the journey. His death has cast a gloom over the students.

GLASGOW SCHOOL OF PHARMACY.—On Saturday last the students of this School, accompanied by the Principal (Mr. John Lothian) and demonstrators, visited the works of Messrs. Harkness, Beaumont & Co., Edinburgh, which include two departments not usually found in connection with a wholesale drug-house—viz., calcium-bisulphite and vinegar plant. In making calcium bisulphite, sulphur dioxide is generated by the action of charcoal on vitriol and passed into slaked lime. In making malt vinegar the wort is rapidly cooled in refrigerators, then fermented with yeast, and aceticified by being sparged over birch shavings (impregnated with *Mycoderma aceti*) while kept at a temperature of about 90° F. The product contains from 10 to 12 per cent. of acetic acid, and on keeping the flavour is developed by the action of the acetic acid on the unoxidised alcohol, ethyl acetate being formed.

Trade-Marks Applied For.

Objections to the registration of any of the undermentioned applications should be lodged with C. N. Dalton, Esq., C.B., Comptroller-General of Patents, Designs, and Trade-marks, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned. The objection must be stated on Trade-marks Form J, cost 1*l.*, obtainable through any money-order office.

(From the "Trade-marks Journal," March 14, 1900.)

"CHESSHIRE"; for medical preparation. By A. H. Chesshire, Goldsmith Gardens, Acton, W. 228,178.

"SULPHUME" (no claim for "Sulph"); for toilet-preparations. By H. E. Henwood, 154 Lake Street, Chicago. 227,604.

"MADONNA"; for eau de Cologne. By Johann M. Farina, Friesenplatz, Cologne. 228,004.

Burn, scald, and device of fireman; for a lotion for curing burns and scalds. By T. Kingston, 16 Grandison Road, Wardsworth, Surrey. 227,761.

(From the "Trade-marks Journal," March 21, 1900.)

"VIRIDOLIN" and "LINALBIN" (no claim for "Virido"); for veterinary preparations. By Stephen Pettifer, Malmesbury, Wilts. 228,330, 228,331.

"ANEEMAPILS," name and address on label; for a tonic pill. By John Nuttall, 196 Ashton Road, Oldham. 228,174.

"UROSOLVAL" (no claim for "Uro"); for chemical substances. By the General Chemical Company (Limited), 57 Chancery Lane, E.C. 228,556.

"LUNKURA"; for medicine. By A. L. W. Fetchner, 186 Spring Bank, Hull. 228,637.

"ALVALOIDS"; for medicinal capsules. By the Liverpool Medicated Capsules Company, 4 Colquitt Street, Liverpool. 228,709.

"ICHTHARGOL" and "ICHTHERMOL"; for goods in Class 3. By the Ichthyol Gesellschaft Cordes Hermann & Co., 21 Bohnenstrasse, Hamburg. 228,795, 228,797.

Port ait of applicant and wording; for ointment. By Elizabeth Simmons, 9 Orwell Road, Kirkdale, Liverpool. 228,955.

Pharmaceutical Society of Great Britain.

COUNCIL MEETING.

At Wednesday's meeting votes of condolence were sent to the families of the late Mr. James Watt, of Haddington, and Mr. W. Burley, of Edinburgh. There were twenty-six nominations for the seven vacancies which will occur on the Council in May, and of these seventeen have signified their willingness to serve if elected. The Government visitor to the examinations has reported to the Privy Council that the standard of the examinations has been fully maintained during last year, and that the conduct of the examinations has met with his approval. The Society have purchased for a sum of about 1,000*l.* a house standing on their ground at Strawberry Hill, which is likely to prove a good investment. A sum of 83*l.* was granted from the Benevolent Fund for the relief of necessitous persons. Several provincial societies wrote approving of the Society's action in opposing Clause 2 of the Companies Bill. The Council medals and certificates of honour were awarded to Major students in the School of Pharmacy.

The Council-meeting on April 4 began at 11.15. There were present the President (Mr. W. Martindale), the Vice-President (Mr. Newsholme), the Treasurer (Mr. Atkins), and Messrs. Allen, Bateson, Carteighe, Corder, Cross, Glyn-Jones, Grose, Harrington, Harrison, Hills, Savory, Symes, Warren, and Young.

CONDOLENCES.

The minutes of the previous meeting having been read, the PRESIDENT referred to the death of Mr. James Watt, pharmaceutical chemist, of Haddington, which occurred on March 11. Mr. Watt took considerable interest in the work of the Society, and was for six years a member of the North British Branch, and for four years a member of the Council in London. He retired from these offices in 1892. After the death, a few years ago, of his son, who was associated with him in business, he took Mr. W. P. Wilson, a former apprentice, into partnership, and practically retired from business. They would remember him on account of his genial face and wise and sage advice. Mr. Watt had been married fifty-one years, and a few months ago celebrated his golden wedding. He had nine children, and of the sons the eldest survives. This son, a barrister in London, had made a name in literature as the author of a "Life of John Bright" and "Picturesque Scotland." Mr. Watt was struck down suddenly with a paralytic stroke, and passed peacefully away at the ripe age of 77. He moved that a vote of condolence be sent to the family.

The VICE-PRESIDENT, in seconding the vote, said he did not know that he could add anything to the President's remarks. Those who remembered Mr. Watt would know him as a man who held opinions, and sometimes had strong arguments with Mr. Carteighe, who was then President. He believed Mr. Carteighe sometimes brought Mr. Watt round to his way of thinking, and that even on occasions Mr. Watt succeeded in convincing Mr. Carteighe. (Laughter.)

Mr. ATKINS said he had known Mr. Watt very well, had visited him at Haddington, and he had a great respect for him.

The motion was carried.

The PRESIDENT referred also to the death of Mr. W. Burley, of Edinburgh, who died recently from an attack of influenza, and who was a comparatively young man. The regrets of the Council were also ordered to be sent in this case.

THE WATERALL LEGACY.

Mr. ATKINS said arising out of the minutes he had to announce that he had purchased with the Waterall legacy 1,000*l.* worth of Consols. The amount made a clean balance-sheet.

The PRESIDENT remarked that the income would be duly apportioned to suitable applicants in the future.

ELECTIONS.

A number of persons were then elected members, and student-associates and others were restored to the Society and some to the register.

The Privy Council had sent the Council a copy of Dr. Stevenson's

REPORT ON THE EXAMINATIONS.

The report states that for the First, or Preliminary, examination there were 1,589 candidates, and of these 745 (47 per cent.) passed and 843 (53 per cent.) failed. Of the failures, 593 (37.3 per cent.) were in Latin, 483 (30.4 per cent.) in English, 739 (46.5 per cent.) in arithmetic, and 325 (20.5 per cent.) in all subjects. "The figures," Dr. Stevenson says, "reveal the striking fact that about seven out of eight candidates who failed were rejected in arithmetic—a subject of supreme importance to the chemist and druggist. The examination is by no means a severe one. It will be superseded in the ensuing year by a higher examination, the effect of which will doubtless be to reduce the number of candidates who will be able to present themselves for the qualifying Minor examination. The alteration is a commendable one." For the Minor, or Qualifying, examination 1,371 candidates presented themselves; of these 378 (27.6 per cent.) passed and 993 (72.4 per cent.) failed. The failures were 599 (43.7 per cent.) in chemistry, 24 (1.8 per cent.) in materia medica, 31 (2.3 per cent.) in botany, 44 (3.2 per cent.) in prescription reading, 299 (21.8 per cent.) in pharmacy and dispensing, whilst 129 (9.4 per cent.) failed to obtain the aggregate number of marks necessary for a pass. "The number of candidates was quite exceptionally large, and the proportion of rejections more than the average. It will be seen what a very large percentage of candidates failed in the two most essential and practical subjects of chemistry and pharmacy and dispensing. Indeed, a large number of candidates having hopelessly failed in one or both of these practical subjects were rejected without having been examined in other branches. Practical chemistry and pharmacy and dispensing are subjects not lending themselves to cram, and the need of laboratory training is painfully revealed by the results of the examinations. Having paid close attention to these I cannot say that the examiners have been unduly severe, having regard to the paramount interests of the public. It is not too much to ask that the chemist and druggist should be not only able to dispense accurately, but also be able to test the ordinary chemical substances he uses in his business, and these attainments are rigorously demanded of the candidates. The improvement in the quality of the candidates noted in my report last year has not been altogether maintained." For the Major examination there were 103 candidates, and of these 50 passed and 53 failed. The failures were 29 in chemistry, 18 in physics, 8 in materia medica, and 13 in botany, while 13 candidates failed to get the aggregate number of marks necessary to pass. "The number of candidates who presented themselves was below the average of the last few years, while the percentage of passes was about the same. There were, however, more failures in specific subjects and fewer failures in aggregate marks. The standard of the examinations was fully maintained, and the conduct of the examinations met with my entire approval."

COUNCIL ELECTION.

The SECRETARY announced that twenty-six nominations had been received for the seven vacancies which would occur on the Council in May. Of these the following seventeen had expressed their willingness to serve if elected:—

Bateson, Thomas, Kendal	Grose, Nicholas Male, Swansea
Campkin, Algernon Sidney, Cambridge	Hills, Walter, London
Cooper, Albert, Kensington	Morrison, John William Thomas, Tring
Cross, William Gowen, Shrewsbury	Pickering, Charles Edward, London
Currie, William Little, Glasgow	Storrar, David, Kirkcaldy
Gibbons, Walter, Manchester	Symes, Charles, Liverpool
Gifford, Richard Lord, Blackburn	Taylor, John, Bolton
Gostling, George James, Stowmarket	Warren, William, London
	Wootton, Alfred Charles, London

The following gentlemen had been nominated, but were not willing to stand:—Messrs. J. W. Bowen, W. L. Howie, J. Ince, C. Kerr, J. Mackenzie, J. Reid, G. S. Taylor, C. Umney, and R. E. Wright.

Mr. Chas. Hodgkinson was nominated an auditor in place of Mr. Stacey, the other auditors being Messrs. Batt, Lescher, Umney, and Yates.

Mr. CARTEIGHE said Mr. Chas. Hodgkinson was a man of considerable common sense—a quality necessary even in an auditor. (Laughter.)

The report was then read of the

FINANCE COMMITTEE.

It showed a balance on the

	£	s.	d.
General Fund account	1,950	18	7
Benevolent Fund current account ...	1,161	9	1
Donation account	105	0	0
Orphan Fund account	279	6	6

and submitted for payment 2,024*l.* 8*s.* 7*d.* from the General Fund account and 16*l.* 11*s.* from the Benevolent Fund account. The payments included 576*l.* on behalf of the *Journal*; 691*l.* salaries and annuities; 37*l.* law-expenses; 86*l.* sundries; 121*l.* for register and calendar; 650*l.* current expenses; and 331*l.* for rent and taxes. The report also recommended that the Treasurer be authorised to sell 1,200*l.* worth of Consols to purchase "The Elms," Strawberry Hill.

The PRESIDENT, in moving the adoption of the report, said they had a considerable amount of money coming in from subscriptions and examination-fees, which made their income above the average and their payments about the same. The report was adopted.

The report of the

BENEVOLENT FUND COMMITTEE

was then taken in committee, after which the Vice-President moved the adoption of the report, which recommended grants to the amount of 83*l.*

Dr. SYMES remarked that only one of the six cases had been subscribers to the fund. The report was adopted.

A donation of 25*s.* from the Liverpool Pharmaceutical Students' Association, the proceeds of a smoking-concert, was announced, the PRESIDENT remarking that they were thankful for small mercies.

THE LIBRARY, MUSEUM, AND HOUSE COMMITTEE'S REPORT

was then read. It stated that the staff of the School and Editor of the *Journal* had attended before the committee and reported, and it recommended that the front of the House be washed and given one coat of paint in May. The committee then forming itself into a Research Committee, received a report from Professor Collie as to the progress of certain researches made in the laboratories at the request of the General Medical Council.

The report was adopted.

LOCAL SECRETARIES.

In response to a letter from Mr. C. Thompson, local secretary, Birmingham, Mr. G. E. Perry was appointed assistant local secretary for the Western Division of Birmingham. Mr. W. P. Wilson, partner of the late Mr. Watt, Haddington, wrote offering himself as local secretary for the Haddington district, and was appointed.

TEMPORARY EXAMINER.

The PRESIDENT then said, in regard to the examinations which were proceeding and were exceptionally heavy, that owing to the breakdown of one of the examiners it was necessary to appoint an assistant-examiner.

It was then moved that Mr. Edmund White be appointed in accordance with By-law 7, Section 10, his duties being to assist in the *vis-à-vis* portion of the examinations, which comes on after Easter, and will occupy five or six days.

The motion was carried.

LETTERS.

Resolutions were then read, in abstract, approving of the Council's action in opposing Clause 2, and in some cases suggesting the promotion of a new Pharmacy Bill, from the

Manchester Pharmaceutical Association,
Sheffield Pharmaceutical and Chemical Association,
Oxford Chemists' Association,
Lancaster and Morecambe Chemists' Association (supporting Clause 2 of the Federation proposals),
Bolton Pharmaceutical Association,
The Local Secretary, Lincoln (on behalf of the local chemists),
Leicester Social Union,
Forfarshire Chemists' Association,
Midland Pharmaceutical Association,
Glasgow and West of Scotland Chemists' Association.

Mr. HILLS said the resolutions were very interesting, but he wished they would not only advise as to framing a new Pharmacy Bill, but tell the Council on what lines legislation was desirable.

The PRESIDENT: Yes; constructive and not destructive criticism.

Dr. SYMES remarked that all the resolutions supported the Council.

Mr. GLYN-JONES: Yes; but most of them have a postscript asking the Council to do certain things.

Mr. HILLS said he wished they would support the Council a little further and suggest a course of action.

Mr. YOUNG: They look to us for light and leading.

OTHER MATTERS.

The PRESIDENT then moved that power be given to affix the corporate seal of the Society to the transfer-deeds of the Strawberry Hill property, the purchase of which it was contemplated would be completed that afternoon.

Mr. CARTEIGHE, in seconding the motion, spoke of the propriety of buying the house. It stands on their own freehold ground—one of their first purchases of ground-rent. The ground round the house was in such a position that it might be damaged by building in the neighbourhood, and they had had to consider their ancient lights and rights, and, moreover, had to deal with a difficult lessee. Instead of wasting time in law (they had to spend some money to no purpose as it was), they thought it better to buy the house. They had accordingly purchased the interest of the lessee in the house, and the transaction would be completed that afternoon. They would then not only get the ground-rent but the rent of the house. The investment, he reckoned, would pay them from 6 to 6½ per cent.

It was mentioned that the auditors had submitted the financial report to the Council, and, in reply to a question from Mr. GLYN-JONES, the PRESIDENT said it was to be considered by the Council.

The portion of the General Purposes Committee dealing with the

COUNCIL PRIZES

was then read. It recommended that the following awards be made:—

Botany.—Silver medal, Mr. E. W. Pollard; certificates of honour, Mr. H. Finnemore, Mr. J. F. Young.

Chemistry.—Silver medal, Mr. J. F. Young; certificates of honour, Mr. E. Nash, Mr. H. Finnemore.

Practical Chemistry.—Silver medal, Mr. H. Finnemore; certificates of honour, Mr. J. F. Young, Mr. E. Nash.

Materia Medica.—Silver medal, Mr. H. Finnemore; certificates of honour, Mr. E. W. Pollard, Mr. P. B. Gray.

This was agreed to and ended the public business.

JAPANESE CHEMICAL-INDUSTRY.—Near Osaka, the Yuso Kwaisha alkali-works and the Nippon Yuso Kwaisha sulphuric-acid plant are both in steady operation. The first-named was started in 1893 by English engineers, who fitted it up on the most approved principles, but it is now entirely under Japanese management. At the works of the Nippon Yuso Kwaisha, sulphuric acid is concentrated in Kioto porcelain vessels in terraced succession. Wakayama and Okayama pyrites, containing from 47 to 50 per cent. sulphur, are used. The sulphuric acid, packed in earthenware carboys, has been exported in small quantities as far as Bombay. There are numerous soap and perfumery factories in Osaka and a pharmaceutical factory in Tokio, but all produce low-quality goods at present. Iodine is also manufactured from seaweed, but only in very small quantity.



MR. A. S. CAMPKIN.

COUNCIL CANDIDATES.

FOR seven vacancies in the Council of the Pharmaceutical Society of Great Britain there are seventeen candidates. Here are given portraits of seven of the ten who have not hitherto had seats on the Council.

A. S. Campkin, Cambridge, chemist and druggist in business before 1868 Act. Was a candidate in 1899, and obtained 1,088 votes.

Albert Cooper, South Kensington, Ph.C., of Cooper's Sinapine tissue, and the P.A.T.A.

W. L. Currie, Glasgow, chemist and druggist (Minor 1830). Ex-President of the Federation.

Walter Gibbons, Manchester, Ph.C. 1879.

R. L. Gifford, Blackburn, Ph.C. 1831.

John Taylor, Bolton, chemist and druggist (Minor 1878).

A. C. Wootton, North Finchley, Ph.C. 1865.

From the accidental circumstance that portraits of seven candidates appear on this page, it is not to be inferred that these gentlemen are our selection for the vacancies. We hope to give other portraits later on. The names of all seventeen candidates are given in the Council report, and a preliminary note on the election is printed on page 592. A post-card competition in connection with this election is announced on page 595.



MR. A. C. WOOTTON.



MR. ALBERT COOPER.



MR. JOHN TAYLOR.



MR. W. L. CURRIE.



MR. R. L. GIFFORD.



MR. WALTER GIBBONS.

Winter Session.

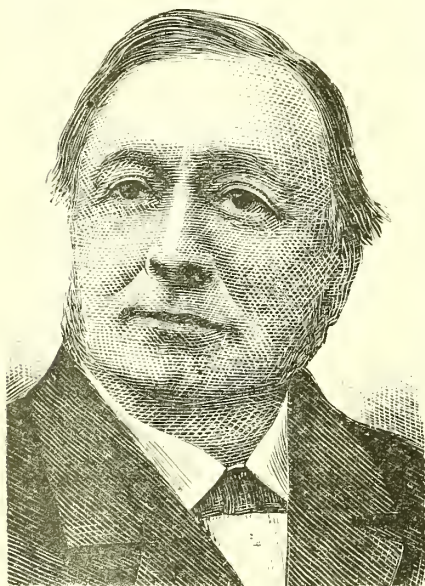
Notices of meetings to be held are inserted under "Coming Events." If meetings are not attended by reporters, secretaries of associations would oblige by communicating with the Editor.

Chemical Society.

ON the evening of the anniversary (March 29) the lecture-hall in Burlington House was packed with Fellows of the Society and their friends, who had come to hear Sir Henry Roscoe deliver the

BUNSEN MEMORIAL LECTURE.

Special interest was given to the lecture from the fact that Sir Henry was one of the great German chemist's earliest pupils and a life-long correspondent with him, whilst his name was also associated with Bunsen's in respect to some of his most important researches. Professor THORPE, the President of the Society, took the chair a few minutes before 8.30, the time at which the lecture was



SIR HENRY ROSCOE, PH.D., LL.D., F.R.S.

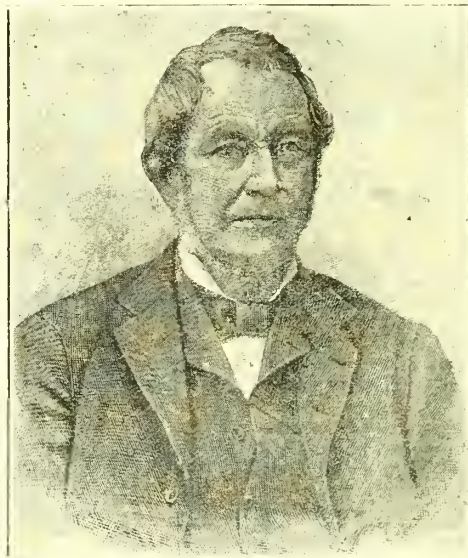
advertised to commence, and briefly introduced the lecturer. Sir HENRY ROSCOE began by reading a telegram from Mr. Philip Bunsen, executor and nephew of the professor, conveying the respectful thanks and compliments of the family to Sir Henry and the Chemical Society for the honour that they were doing to his late relative. The discourse differed in style from any other memorial lecture which has been delivered to the Chemical

Society, and it gave the younger generation of chemists the opportunity of seeing for themselves the characteristics of Sir Henry Roscoe which have placed him at the front amongst English chemists. Most memorial lectures hitherto have gone into some detail in respect to the work of the men dealt with, showing the influence of their discoveries upon chemical theory and the progress of science. Sir Henry more happily spoke less from printed records than from private correspondence, and dealt with Bunsen's life-work in the principal sections under which it fell. He reminded the Society that on August 16, 1899, the last link between chemists of our time and the great men of the past had been severed through the death of Bunsen, for he had been associated with Berzelius, Gay Lussac, Dumas, Liebig, Wöhler, Mitscherlich, and the Roses. He had lived to the ripe age of 88, and had seen many of his colleagues and pupils come to eminence. Sir Henry then quoted an appreciation which he had contributed to *Nature* in 1881, and stated that for nearly half a century he had been the friend, pupil, and colleague of Bunsen, so that he could give something more than a scientific record of his life, and desired to give a picture of the man working in his laboratory. Bunsen was born in Göttingen on March 31, 1811. His father was a professor in the university there, and in 1828 young Bunsen became a pupil of Stromeyer in chemistry, taking his degree in 1830. Then he went to Paris, and returned in 1834 as *privat docent*, lecturing six

days a week on theoretical chemistry. In 1836 he succeeded Wöhler as professor of chemistry in Stuttgart, in 1851 went to Breslau in a similar capacity, and in the year following was appointed to succeed Gmelin as professor of chemistry at Heidelberg. Sir Henry then proceeded to speak of the nature of

BUNSEN'S CONTRIBUTIONS TO CHEMICAL SCIENCE,

and it was remarkable to observe how many things of first-class importance his name is associated with; The first thing he did was to discover that freshly precipitated ferric hydroxide is a perfect antidote to arsenic. The next thing was his research on cacodyl compounds, which first showed



THE LATE R. W. BUNSEN, PH.D., F.R.S.

his remarkable powers of observation. This work occupied his time between 1837 and 1843, and placed him in the first rank of investigators. Sir Henry quoted the contemporary opinion of Berzelius (1837) upon this research, which really formed the foundation-stone of the theory of compound radicals, and pointed out that, although cacodyl contains 54 per cent. of arsenic, it is comparatively non-poisonous, 8 gr. of it having had no ill-effect upon a small animal, yet cacodyl cyanide is both dangerous and toxic. Through an explosion of the latter compound Bunsen lost the sight of one eye and was nearly poisoned, for the mere smelling of its vapour produces giddiness which rapidly develops into insensibility. Nevertheless, Bunsen completed his experiments on it, and the research assisted Frankland and Kolbe in their work on atomicity, and gave great impulse to this branch of research, as a quotation from Frankland previous to his collected memoirs clearly proved.

Ironsmelting was the next great subject to which Bunsen's attention was called. From 1838 to 1845 he elaborated and perfected his gasometric methods, as a result of which he was enabled to determine the composition of blast-furnace gases, and showed German ironsmelters that they were losing 50 per cent. of the heat of the fuel that they employed. The late Lord Playfair in 1845 brought these investigations under the notice of the British Association jointly with Bunsen, and as a result of this co-operation Bunsen came to England to investigate the processes of ironsmelting then in vogue here, and in which coke and coal were used either with a hot or cold blast. He and Playfair worked together in the matter, studying the chemical changes which take place, and, as a result, they showed that 81 per cent. of the heat of the fuel employed was lost. It was six years, however, before English ironmasters paid any attention to Bunsen's work, and then a start was made in reform, as a result of which, Sir Henry Roscoe stated, a saving was effected which must be reckoned by millions, not to mention the valuable by-products which

have been recovered. It was during this investigation that Bunsen was nearly killed by potassium-cyanide vapour coming from the blast-furnaces. This accident, which is related by Wemyss Reid in his "Life of Playfair," was the first indication that cyanide is amongst the products of combustion of coal.

METHODS OF MEASURING.

Gasometry engaged Bunsen's attention to a very large extent from 1847, and our best methods are attributable to him. The lecturer lightly reviewed this part of Bunsen's career, and passed on to consider the Bunsen battery, in which the elements are carbon and zinc. This was a very great improvement over Grove's battery, and was the beginning of a new era in the economic production of electricity, as the combination reduced the initial cost and greatly increased the length of production. It was in 1843, with a battery of carbon-zinc cells, that Bunsen showed the possibility of illuminating with electricity, and the first electric arc light was made by him. In 1852 he commenced the electrolytic preparation of metals. He prepared magnesium, and, in combination with Roscoe, determined the actinic value of the 500-candle-power light which magnesium gives when ignited. This combined research showed how magnesium can be used for photographic apparatus, and the cheaper production of magnesium enabled Augustus Mathieson to work out the industrial production of alkali metals. The Bunsen battery also enabled electrolytic methods to be used for the first time in organic chemistry, acetic and valerianic acids being the first things made by Kolbe, while other workers took up other subjects.

The photometer was invented by Bunsen in 1844. The essential feature of his apparatus is a disc of paper with a grease-spot in the centre, or a piece of greased paper with an ungreased spot in the centre. It was while examining this photometer in Bunsen's laboratory that the late Emperor Frederick said, "Now, for the first time in my life, I know the value of a spot of grease."

The ice calorimeter for determining specific heats was the next great achievement by Bunsen, and he devoted much attention to the production of iridium, cerium, and other metals by the alkali earths which up to that time had only been obtainable in minute quantities. The vapour calorimeter he invented when he was about 80. Then came the study of photo-chemical processes, in which Roscoe was associated with him, and, the most famous study of all, spectrum analysis. During his residence in Breslau, said Sir Henry Roscoe, the most important discovery that Bunsen made was the discovery of Kirchhoff, who became professor of physics at Heidelberg. Sir Henry quoted from a letter of Bunsen's to himself an account of Kirchhoff's discovery of the meaning of the Fraunhofer lines in the solar spectrum, as a result of which Bunsen was having sleepless nights, for he and Kirchhoff were applying the new facts to the analysis of metals. Amongst the facts mentioned in the letter were that he could detect by the spectroscopic method $\frac{1}{20000}$ milligramme of lithium and the constituents of sea water. He concluded this letter by asking Roscoe to send him some boiler-deposit from an ocean-going steamer. In 1860 Bunsen discovered caesium, the fourth alkali metal, as a result of spectroscopic methods; he isolated it from 50 grammes of the chloroplatinite, which was derived from 40 tons of mineral water. He told Roscoe that he recognised the new metal by its blue-spectrum line, and that he hoped "next Sunday" to determine its atomic weight. As a result of the introduction of spectrum analysis, metals such as rubidium, thallium, iridium, gallium, and scandium have been added to the list of the elements, but many more "metals" have been isolated by would-be great men; and Bunsen once wrote to Roscoe that he was "disgusted with the frivolous way in which new 'metals' were being discovered." In 1863 an extraordinary accident happened in Bunsen's laboratory. An iron tube containing a rubidium residue was being handled by the porter's child, and while the child had the tube in its mouth the chemical exploded and fatally burnt it. Kirchhoff, writing to Bunsen at this time, said, "The disaster which you have read about in the papers really happened." At this the Fellows of the Society laughed heartily, and although it was not the first time that humour had dropped from the lecturer it was the first genuine laugh, and there were many more before the close

of the evening. Sir Henry then proceeded to sketch very rapidly the discovery of absorbent spectra and Bunsen's great liking for chemical geology and his visit to Iceland.

THE MAN HIMSELF.

The concluding part of the lecture was devoted to a delightful account of personal reminiscences of Bunsen, dating from 1852. This was brightened up with many anecdotes, which brought out the quiet humour of the man. Thus, when at one time he was visiting England there was a good deal of confusion between him and Baron von Bunsen, the philosopher, who was much better known to the English public. An old lady one day asked the chemist Bunsen, "Did you ever conclude your valuable work on 'God in History'?" "Alas! no, madam," replied Bunsen, "my untimely death prevented that." One day at Heidelberg a chemist called upon him, whom he took to be Staeché or Kekulé—he could not make up his mind which. He talked to his visitor for a long time, but just when he was leaving Bunsen had made up his mind that the visitor was Kekulé, and he remarked to him, when he shook hands, "Do you know, for a moment I took you to be Staeché?" "So I am," replied the visitor. The Heidelberg laboratory of those days was in the old monastery, and Sir Henry Roscoe told how, as the students grew in numbers, the monastery was bit by bit utilised until the cloisters were enclosed and converted into a laboratory. The students then used to tread over dead monks, and throw precipitates on their tombstones. Accuracy of work was a characteristic of these laboratories. Bunsen took no end of pains himself, and stringently required his students to do the same. The Bunsen burner originated in the following way. On returning from England after a vacation Sir Henry, then a pupil, took with him an Argand burner with wire gauze at the top; it struck him as being an immense advance over the oil-flames that they worked with at Heidelberg. Bunsen did not like the burner, and told Roscoe that he would make something better. After a lot of trouble the famous burner was evolved which has had so extraordinary an influence upon economic and domestic matters. Bunsen was not a money-making man; indeed, he abhorred the idea of prostituting science to those ends. Much of his research was done in the early morning hours. Amongst other peculiarities of Bunsen mentioned by Sir Henry was the fact that up to the time of his death he had never used the modern atomic weights. Bunsen and Kirchhoff were awarded the first Davy medal. Amongst the relics exhibited was a large photograph of a group consisting of Bunsen, Kirchhoff, and Roscoe.

At the conclusion of the lecture, which lasted well over an hour and a half, the lecturer was roundly applauded, and the PRESIDENT added some reminiscences of his own. He said that Bunsen was excessively fond of three things—accounts of horrid murders, potted shrimps, and handsome chemical specimens. When he first visited Heidelberg with a letter of introduction from Roscoe, his father in chemistry (Bunsen he regarded as his grandfather), he took with him a copy of the *Times* containing an account of a very horrid murder, a supply of potted shrimps (from a lady whom he was pleased to see present that evening), and very fine specimens of potassium and sodium. Dr. Thorpe humorously told how the last-mentioned had been put together in one bottle by the laboratory-porter at Owens College, and when Bunsen took it out of the box there was nothing in the bottle but what he and Thorpe considered to be mercury and paraffin. Neither knew then that potassium and sodium form a liquid alloy. During this interview Bunsen, who was a tall, heavy man, sat on his visitor's hat.

A vote of thanks to Sir Henry Roscoe was moved by Professor ODLING and seconded by Dr. EDMUND ATKINSON, the editor of Ganot's "Physics," who was with Roscoe at Heidelberg, and, strange to say, is "his double" in facial appearance. Sir Henry briefly acknowledged the compliment, and the meeting adjourned.

Midland Pharmaceutical Association.

THERE was a good turn-out of members of the above Association at Mason College, Birmingham, on March 29, to hear a paper by Dr. Alfred H. Carter, F.R.C.P., Senior

Physician to the Queen's Hospital, and Professor of Medicine in Mason University College, Birmingham. The Chairman was Mr. Jeffrey Poole, President of the Association. Dr. CARTER'S subject was

THE PLACE OF DRUGS AND THE TREATMENT OF DISEASE.

Dr. Carter considered that the public much overrate the action of medicine, and that a great deal is prescribed because patients think they will not get well without medicine. Benefit was often attributed to a drug when, if the disease had been left to itself, the grave-symptoms stage might have passed just as well. During the last half-century the attitude of prescribers regarding the use of medicines had been radically altered owing to truer conceptions of the nature of disease in general, to a far more exact knowledge of the causes of disease, and the mode in which they operated, and to an extraordinary diagnosis. More exact knowledge of the methods of treatment had also simplified matters—better hygienic conditions, better dietary, better pharmacology, and more exact physiological knowledge, especially of the functions of the cells of the body, having contributed to this.

With the exception of a few diseases dependent upon some specific cause, or poison which is capable of being directly removed or neutralised by drugs, the latter are incapable of dealing directly with that larger majority of ailments which depend upon faults of environment. At any rate, they can do little or nothing by way of cure, and whatever advantage they are capable of conferring must be of an entirely subordinate and exclusively adjuvant nature. Yet the system more readily responds to those agents to which it is accustomed, such as climate, nourishment, fresh air, light, heat, cold, exercise, and the like, rather than by the introduction of agents which are naturally foreign to the body, such as drugs. Dr. Carter paused for a moment to consider in what sense we are justified in claiming to cure disease at all, and went on to say that the only drugs that could be said in any sense to *cure* disease were just those few which strike at prime causes. They might almost be numbered on the fingers of one hand—viz., quinine in malarial fever, mercury and iodide of potassium in certain forms of syphilis, sulphur in scabies, certain parasiticide drugs in skin-diseases due to a vegetable growth like ringworm, permanganate of potash in early stages of opium-poisoning by the mouth, and chlorate of potash in certain forms of stomatitis. Salicylate of soda only just fell short of being a specific for uncomplicated acute rheumatism. Digitalis in certain types of heart-disease helps the organ to contend successfully with its difficulties, and in certain cases almost deserves the rank of a curative drug. Generally, drugs can only minister indirectly to recovery in one of the following ways:—(1) By relieving symptoms, especially by the relief of pain and sleeplessness; (2) by applying something of which the body is in need, such as lime and iron, or fat, in the form of cod-liver oil; (3) by promoting natural processes of elimination by skin, bowels, or kidneys; (4) by assisting the processes of nutrition; and (5) by helping to obviate the tendency to death.

THE DEVELOPMENT OF PHARMACY.

Turning to topics of a more strictly pharmaceutical order, Dr. Carter pointed out that in the course of the century which is now expiring there have been vast changes in the application of pharmacy for medical purposes. He contrasted the first Pharmacopœia of 1618, with its 1,254 drugs and preparations, with the 1898 one. The leading features of the pharmacy of to-day are, he said, first, a much smaller number of drugs is employed than ever before, especially by individual prescribers. So exact has medication become that when one sees a variety of medicinal remedies recommended for any complaint one might be quite sure either that very little is known about it or that very little can be done for it. A second feature is increased simplicity of prescriptions, which often consist nowadays of only one active ingredient, for it is obvious that the combination of drugs, except in a very limited and simple way, must confuse judging the results of medication. A third feature, closely allied to and growing out of that first mentioned, is an increased preference for active principles over crude drugs, whereby medication is brought to a focus, as it were, and dosage is more precise, while the results are made easy, as a

rule, both to recognise and to estimate. A fourth feature is the great increase in the relative prominence of chemical as compared with galenical preparations. Unfortunately the chemical structure of a large number of substances is exceedingly complex, and in the absence of that chemical knowledge which is essential for their intelligent use, the rank and file of practitioners are compelled to rely on the statements contained in the literature with which the introduction of those drugs is accompanied—a literature which endeavoured to compensate for its lack of authority by dogmatic statements inspired by the instincts of commercial enterprise rather than by any desire to extend knowledge for its own sake. A fifth and last characteristic of modern pharmacy is the extraordinary progress that has been made in the form in which remedies are prepared and presented for use. Powders, granules, sugar-coated tablets, capsules, and cachets have not only given to nauseous drugs the attractiveness of bonbons, but have greatly ministered to the convenience of practitioner and patient. He feared, however, that the new *régime* imposes a good deal of extra trouble upon the pharmaceutical chemist, for which he got no adequate remuneration. It would be very desirable if some plan could be devised which would meet the objectionable and rapidly-growing habit of self-medication with active and powerful drugs on the part of the public, which was due to the facility with which bottles of medicinal tablets [tablets] labelled with full therapeutic directions could be obtained. He thought something might be done to stop this if the leading dispensing-chemists of the city were to draw up a list of such preparations as they were prepared to stock, without reference to any particular maker, so that doctors could prescribe them in the ordinary course like any other preparation.

Dr. Carter then proceeded to speak about

THE 1898 PHARMACOPOEIA,

stating that it was, from the medical man's point of view, a great advance on its predecessor. Apart from the riddance of rubbish, it was its most conspicuous merit that the Pharmacopœia tended to greater simplification of dosage, standardisation, and methods of preparation. When once, he said, a practitioner came to know that all he could reasonably require for the medicinal treatment of disease might be found within the four corners of the Pharmacopœia, he would see that the more strictly he confined himself to such official resources the better for himself, for his patients, and for the dispensing chemist. The deficiency of such attractions, which had only been too apparent in previous editions, had much to answer for in the relatively small use that had been made of it. Of course, there always was, and ought to be, room for the introduction of new drugs and methods of preparation which deserved attention; but he condemned the wholesale fashion in which chemicals were issued from German laboratories, and the multiplicity of vegetable extracts which we owed to the ruthless enterprise of American drug-firms, nine out of ten of which were simply a snare and a delusion. It was, for the most part, a monstrous system of quackery which diminished the whole art of medicinal therapeutics, struck at the very root of reasonable and intelligent practice, and sacrificed the best interests of a noble profession to the rapacity of

A HUNGRY COMMERCIALISM

which cared for nothing but the filling of its own pockets. He thought something might be done by giving greater prominence in the teaching at medical schools to methods of medicinal treatment, and by attaching greater importance to the selection of appropriate medicines and the art of prescribing. The crowded condition of the medical curriculum, the pressure arising from the number of patients to be seen and dealt with, and the promiscuous employment of a cut-and-dried hospital formulary were not favourable to the cultivation of the arts and methods of modernised pharmacy as applied to the treatment of disease. He liked also to think that it was something more than a vain Utopian dream to look forward to the organisation at some not very distant day of a society for the systematic, therapeutical, and pharmacological investigation of current new remedies, with access to laboratories and hospitals for the purpose, and affiliated with independent members all over the country, whose special business it would be to sift the wheat from

the chaff, and publish their reports at periodic intervals, or to draw up from time to time something of the nature of an authorised extra Pharmacopœia. Such an organisation might also deal with chemical analysis in relation to the composition of advertised foods, malt-extracts, and quack medicines for the benefit of medical practitioners.

Dr. Carter next proceeded to say a word about the splendid progress of the pharmaceutical profession during the last fifty years, and affirmed that it would redound to the credit and sagacity of the Pharmaceutical Society that, in spite of the prejudice, ignorance, and indifference with which they had to contend, they had kept steadily before them the ideal of progress through knowledge, and fought their way step by step with magnificent perseverance until they had attained the important and influential position which they now occupied. "Prescribing chemists" then received his attention, and in the course of his remarks he said he would not forbid a person applying at a pharmacy and obtaining a simple remedy for a passing toothache, a muscular pain, or trifling dyspeptic ailment, or constipation, provided the person seeking relief knew what he was about, and was not deceived by the assumption of an authority or of titles on the part of the chemist, and provided that such relief was merely to be regarded as first-aid or a temporary expedient. *Appropos* of this, he said his attention was called in May of last year to a book entitled

"DISEASES AND THEIR REMEDIES :

A Concise Survey of the most Modern Methods of Medicine," written expressly for the drug-trade by physicians and pharmacists and published at the offices of THE CHEMIST AND DRUGGIST. A prefatory editorial note says :—

This treatise is offered to chemists and druggists under the conviction that it is of the utmost importance that they should be well acquainted with diseases as well as with remedies—that they fail to occupy the position they are often called upon to hold in their relation to the public, and as an intermediary between them and the medical man, unless they have an intelligent acquaintance not only with the medicine, but also with the cases in which it is used.

All this was mere balderdash, and the information which followed with regard to the diseases referred to was quite in keeping with such nonsense. But this by the way. The gravamen of the whole book lay in the fact that it could only be described as a counter-prescribing manual of the worst possible type. Serious diseases, such as no honourable chemist would take the responsibility of dealing with, were in many cases recommended to be treated with powerful and dangerous drugs, without a single hint as to the necessity of caution or discrimination in their use. A book of this kind from such a source did incalculable harm to their honourable profession, and, if it got its deserts, should be emphatically repudiated by their Society as a highly objectionable publication. The last subject Dr. Carter touched upon was the proposed legislation on medical and pharmaceutical practice by companies. He held that it was unfair and inexpedient that responsible professional positions should be held and conducted by unqualified persons under the "cover" of a single qualified person, such as Clause 2 provided for. It was monstrously unjust and inadvisable that professional men should be placed under the control of, and be exploited for profit by, a body of unqualified persons. He earnestly hoped therefore that Clause 2 would not be carried. [Dr. Carter also included in this the Bill applying to company pharmacies, being apparently under the impression that that still exists.] Although it seemed desirable, he added, that clauses applying to each profession should be kept separate, it was much to be desired that influential representatives of each should combine to approach Mr. Ritchie in defence of important professional principles common to both of them. (Applause.)

THE DISCUSSION.

Dr. KAUFFMAN opened the discussion. He spoke of antitoxins, and, referring to the companies question, said he felt that legislation was imperative.

Mr. A. SOUTHALL, in moving a vote of thanks to Dr. Carter, regretted that he did not attach so much importance to drugs as he (the speaker), as a pharmacist, could have wished. Nevertheless, there was great truth in the doctor's statement that environment, particularly of climate and

diet, had much to do with illness which could not be reached by drugs unless Nature usurped itself. The dispensing of tabloids and the like was objectionable, seeing that after the patient had got his prescription he forthwith began to medicate himself for every ailment by the medicaments which had thus been prescribed.

Mr. GERRARD seconded. He expressed the opinion that one great cause of medication was the great publicity given by the public Press. Periodical literature in particular seemed to be sustained in great measure by these advertisements, which were disastrous alike to the medical profession, pharmacists, and the public.

Mr. CHAS. THOMPSON, speaking as Local Secretary to the Pharmaceutical Society, stated that, in Birmingham at least, very few unqualified assistants were employed to take charge of shops. Some shops were made to look like chemists' shops, which in reality were drysalters' stores, and unqualified men were employed in them; but in these shops scheduled poisons were not offered for sale by retail.

Dr. CARTER, in the course of his reply, again referred to the tabloid-question. He would be delighted, he said, if, by writing a formula for a patient for a certain article—such, for example, as hydrastinine and other suitable adjuvants—that that prescription could be prepared in Birmingham.

Society of Chemical Industry.

LONDON SECTION.

A MEETING of the Section was held at Burlington House, Piccadilly, W., on April 2, Mr. Boverton Redwood in the chair. Some changes in the committee for the next session were announced, and Mr. Otto Hehner was elected Chairman. Mr. A. GORDON SALAMON then read a paper by himself and Mr. E. N. Goldie on

THE MANUFACTURE OF CARAMEL.

He said the manufacture of caramel in this country had assumed relatively large proportions, and was based on the process of *Asymusry*, which had long been a secret one. Thorpe's definition of caramel as "a brown substance produced by the action of heat on sugar or glucose" was interesting, in view of the fact that glucose was now almost universally employed for the purpose. The caramels made from glucose and sugar were practically identical, except that cane-sugar caramel was a little more bitter than glucose caramel. Glucose had the advantage of being cheaper than sugar. The requirements of a good caramel were a maximum of colour-density, a minimum of ash and cupric-oxide reducing-power, absence of precipitation when mixed with proof spirit, and power to resist weak acids. All caramel has some cupric-oxide reducing-power, owing to the presence of undecomposed glucose, and the requirement that caramel should not precipitate with proof spirit was important when it is borne in mind that it is used very largely for colouring ale. It might be argued that as the caramel is added in the early stages of brewing, the precipitating-power does not matter; but, unfortunately, the precipitate has the power of taking down with it the colour of the fluid to which it is added. Caramel is largely a constituent of botanic essences and temperance drinks; but it is a mistake to imagine that the colour of stout and porter is due to caramel. The use of black malt caused the colour, and, if caramel is present, it has been added to correct the irregularities of the colour of kiln-dried malt. The authors suggested the following as suitable analytical data for good caramel :—

Intensity of Colour.—18° on Lovibond's scale in the tintometer, using a 0.1 aqueous solution and series 52 yellow tint.

Sp. Gr.—1.377.

Cupric-oxide Reducing-power.—33.87 per cent. of the weight of fluid caramel.

Mineral Matter.—0.8 per cent. The caramel should not be affected by proof spirit or weak acids, nor should it cloud pale ale.

A *résumé* of the chemistry of caramel was then given and it was mentioned that Gélis had separated three substances from caramel—two crystalline compounds (caramelan and caramelen) and a colloid body (caramelin)—but the chemistry of the caramel was, the speaker said, hopelessly confused.

The paper then dealt with the manufacture of caramel, quoting the methods given by Spon and Thorpe, and giving the following as a working method:—Heat 5 cwt. of maize-glucose in an iron pot till it boils (110°C .), which takes one hour and twenty minutes, then add a mixture of 45 oz. of ammonium carbonate and 15 oz. of ammonium chloride, and further heat with constant stirring. In two hours from the beginning of the process the glucose swells up to double its original volume, and emits greyish-yellow pungent vapours. At this stage the heat is lowered, and evaporation continued for another hour, or until the mass is so thick that it can only just be stirred. If solid caramel is wanted the mass is poured out on to iron plates, cooled, and broken up with hammers. If fluid caramel is required water is added to the mass, and the whole strained. The following data were then given, which show chiefly that the portion soluble in alcohol is no guide as to the quality of caramel:—

No.	Colour Intensity	Per cent. Soluble in Alcohol	CuO Reducing-power per cent.
1	27.8	11.5	51.78
2	24.99	13.0	28.84
3	18.02	16.3	31.02
<i>Portion Soluble in Alcohol.</i>			
1	3.90	—	63.30
2	5.61	—	35.40
3	2.38	—	44.61
<i>Portion Insoluble in Alcohol.</i>			
1	32.9	—	55.05
2	35.1	—	32.47
3	26.1	—	29.93

The results of a large number of experiments with various chemicals used in the process were then detailed. Soda and potash have a tendency to "cinder" the caramel and produce a product which deposits in beer. Acetic acid is uncertain in results, but gives a pleasantly-flavoured product which remains bright in beer. Tartaric and citric acids give fairly good results, but the caramel has a harsh flavour. Ammonium tartrate gives excellent results, but the flavour is inclined to be bitter and the cost of the salt is against it. Ammonium acetate and sulphate give good results, but the flavour of the caramel is harsh. Mineral acids are violent in their action and "cinder," the product, besides corroding the metal vessels. Experiments were then tried of adding the chemicals at various stages of the process. It was found that adding the chemicals at the later stage of manufacture was in many cases a great advantage. Half a pound of caustic soda to 100 lbs. of glucose improved the flavour, but above that proportion the soapy flavour produced was objectionable. Such a product was not suitable for colouring vinegar.

DISCUSSION.

Mr. BOVERTON REDWOOD commented on the excellence of the paper from a practical point of view, and having had the pleasure of listening to Mr. Lovibond's papers on the tintometer was pleased to hear that the instrument had been of such value in estimating the colour of caramel.

Mr. BOLT was disappointed that some of the abstruse reactions which take place in the process had not been elucidated. His experience was that laboratory-experiments scarcely had any relation to the process when carried out on a large scale. As a manufacturer of sixteen years' standing, he confessed they had to work mainly by rule-of-thumb methods, as there are no exact principles to guide them. The tintometer was of no use in getting the exact tint of caramel, owing to the difficulty in exactly matching the colours. It was a curious fact that the makers have doubled the colouring-capacity and reduced the insolubility of caramel within the last few years. The reasons for this are obscure.

Mr. BERRY thought a better way of expressing the colour of caramel would be to give its equivalent to black malt. He would like to know if the authors had tested samples after nine or twelve months, as his experience was that caramelin slowly changed into an insoluble form and

decreased in colour-value. The product, he had found became sweeter on keeping.

Mr. LOVIBOND suggested an improvement in using the tintometer, and said he had drifted to the opinion that unrefined sugar gave a better caramel than refined sugar.

Dr. DVORKOVITCH gave an experience of his in regard to the manufacture of wines at Moscow. As they were aware, no vines were grown round Moscow, but that did not deter manufacturers in Moscow from making wines. (Laughter.) One of these makers was in trouble about the flavour of his dry Madeira, and, on consulting him (the speaker), he advised the substitution of ammonium carbonate for caustic soda in making his caramel, and this turned out to be a perfect remedy. (Laughter.)

Mr. SALAMON, in reply, said he was disappointed that none of the manufacturers of caramel present had given the meeting any information. The reason why the caramel colour-density had increased and the insolubility decreased of late years was, he supposed, because the brewers insisted on having value for their money; and no doubt Mr. Bolt had done a little laboratory-research on his own account. The suggestion to express the equivalent of caramel to black malt was of little value when the treatment of malt in the kiln was considered. He hoped the Chairman, with his well-known persuasive powers, would induce Mr. Bolt to give them a paper, and add to their knowledge of the subject, especially now that he (the speaker) had opened the door.

Glasgow Chemists' and Druggists' Assistants' and Apprentices' Association.

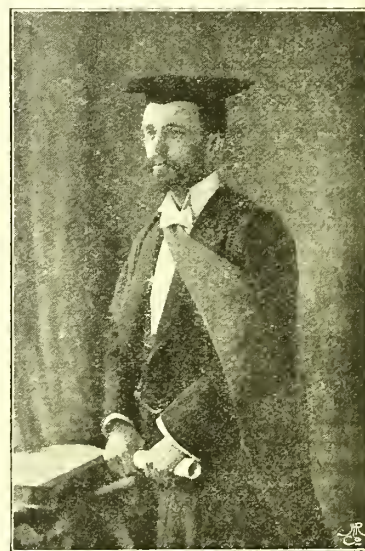
THE weekly meeting was held on March 23, Mr. J. P. Gilmour presiding, when Dr. GEORGE COULL, of Edinburgh, delivered a lecture on the

"STEREO-CHEMISTRY OF CARBON."

The lecturer first showed the necessity for a new theory, owing to the insufficiency of the existing theories to explain the occurrence of

only one disubstituted methane, when ordinary structural formulæ indicated the existence of two isomers, and among other cases of isomerism to explain the existence of ordinary fermentation, lactic acid, and paralactic acid, and of the four tartaric acids. He briefly sketched the history of the theory since its enunciation by Van't Hoff and Le Bel, the aid the latter received from the work of Pasteur and the former from Wislicenus being mentioned. These words of Wislicenus, in his classic paper on "Lactic Acid"—

"The facts compel us to explain the difference between isomeric molecules having the same structural formulæ by the different arrangement of their atoms in space"—set Van't Hoff thinking. Van't Hoff's fundamental conception is that the valences of the carbon atom are situated at the apices of the solid angles of a regular tetrahedron of which the carbon atom occupies the centre. When a carbon atom is united to four different elements or groups there is a manifest want of



GEORGE COULL, Ph.D., D.Sc. EDIN.

Minor, July, 1883; Major, October, 1886. Only one other pharmacist in practice as such holds the Edinburgh doctorate of science.

symmetry, and the atom thus combined is called an asymmetric carbon atom, written thus "*C*." In this case we can predict the possibility of two different relative positions of the groups. This is shown in the *d*- and *l*-lactic acids, which have the same chemical properties, the only difference being in their optical activity and in the solubility of their salts. Their solid formulæ (illustrated by models) are the mirror images of each other. For experimental proof of the truth of his fundamental conception, and that the peculiar isomerism demanded by his three dimensional formulæ really existed, Van 't Hoff pointed to the right and left handed modifications of substances that rotate the plane of polarised light, to the fact that the property of rotation in the case of solutions is peculiar to substances which contain an asymmetric carbon atom, and to the fact that the relation between his formulæ for the two modifications—the object and image relation—is identical with the relation between the crystal forms of the two modifications. The latter relationship (enantiomorphism) is very clearly seen in the right and left handed ammonium bimalate and right and left handed sodium-ammonium tartrate. Accordingly, then, every compound containing *C* ought to exist in two modifications which possess equal and opposite activity. This relation was first discovered by Pasteur in 1848 with the tartaric acids, and was afterwards observed in the case of malic and mandelic acids and many other substances. But many substances which possess an asymmetric carbon atom do not rotate the plane of polarisation. The explanation of this is that when a substance is prepared in the laboratory an equal number of right and left handed molecules are formed, which neutralise each other, and an inactive mixture results. Before discussing the methods of dividing the inactive mixture, it was pointed out that when a derivative is formed from an active compound the activity remains with the asymmetric carbon atom, and vanishes when the resulting compound does not contain *C*. Active amyl alcohol by oxidation gives valeric acid, which contains an asymmetric carbon atom and is optically active, and by reduction dimethyl ethyl methane, which contains two methyl groups attached to the carbon atom. The latter is, therefore, no longer asymmetric, and the compound is inactive. Similarly with tartaric and malic acids, the rotatory power is preserved in their salts, esters, &c., but disappears, for example, in succinic acid, which does not contain an asymmetric carbon atom. It must be added as a final restriction regarding the activity of molecules containing *C* that no compound has yet been found containing less than two carbon atoms united with the asymmetric atom, the group *C.C.* being evidently essential to the possession of optical activity by the molecule.

The separation of the inactive mixture resulting from equal numbers of molecules of equal and opposite activity was then discussed. The various methods of division were described, and their value indicated for different purposes:—

1. By the addition of an active substance such as cinchonine to racemic acid, restricted to acids and bases, but useful for preparing a large quantity of pure substance.
2. By the use of organisms—penicillium, for instance—when added to racemic acid, feeds upon the right-handed modification of tartaric acid and leaves the left-handed, and, in the case of amyl alcohol, it feeds upon the left-handed variety and leaves the right; this method is mainly used qualitatively to ascertain whether a compound is divisible or no, and was used by Le Bel in all his investigations.
3. Spontaneously, by the temperature at which crystallisation takes place; not much used, but interesting historically.

Tartaric acid was taken as a type of a substance containing two asymmetric carbon atoms in a symmetric formula, and the long unexplained isomerism of the tartaric acids clearly shown by the aid of the models, the spatial relationship of the active acids (dextro and levo), and the inactive acids, racemic acid, a mixture of the two active acids, and meso-tartaric acid, an example of the inactive indivisible type being described. The case of unsaturated carbon-compounds was next considered, double linking being shown by placing the edges of two tetrahedra in contact, and triple by placing two surfaces together. As examples of previously unexplained isomerism in doubly-linked (ethylene) derivatives fumaric and maleic acids were specially referred to. It was shown by means of the models how the occurrence of two

such bodies was possible, the greater stability of fumaric acid and the ability of maleic acid to form an anhydride being mentioned as differences in properties due to their three dimensional formulæ.

In conclusion, Dr. Coull expressed his thanks to Dr. Leonard Dobbin, of the Edinburgh University, for the use of the models and crystals used to illustrate the paper.

The CHAIRMAN, having made some remarks on the fascinating power of the subject and the recent great development of knowledge in molecular physics in their relation to chemical theory, Mr. JOHN LOTHIAN proposed a vote of thanks to Dr. Coull, and took occasion to congratulate him upon the clearness and felicity with which he had treated a somewhat formidable subject. Dr. COULL replied, and the meeting closed.

THE FIRST ANNUAL DANCE

of the Association was given in the Rosemount Academy, Renfrew Street, on Wednesday, March 28. There was a large and representative gathering of honorary members and their friends. Mr. J. J. Lynn made a model M.C., and a long and well-balanced programme of dances was carried through with the greatest smoothness and success. The only song of the evening was given by Mr. W. L. CURRIE, whose rendering of the "Soldiers of the Queen" created immense enthusiasm.

THE CLOSING MEETING

of the session was held on March 30, Mr. J. P. Gilmour (President) in the chair. Mr. J. THOMSON read a paper on "The Decline of Pharmacy," which had been postponed from March 9. The author took a depressing view of the immediate future of pharmacy, and contended that as an official art it is being killed by the widespread inundation of speciously-advertised factory-made specialities, the growing use of proprietaries by medical men, and the adoption by the B.P. of standardised galenicals like tr. opii. Owing to the operation of these causes the pharmacist's legitimate *métier* is being atrophied, and he is fast on the way to become an unintelligent distributor of packed goods. In the discussion that followed, the CHAIRMAN deprecated Mr. Thomson's pessimism. One great source of the evil of which he complained was the deplorable ignorance of materia medica and pharmacy shown by modern medical men. Mr. J. P. TAYLOR, having expressed agreement with the Chairman's remarks, added that Mr. Thomson came nearest the truth when he surmised that things are in a transition state. Mr. Thomson was warmly thanked for his paper.

THE FIRST ANNUAL BUSINESS-MEETING

was then constituted. The SECRETARY (Mr. Meldrum) presented his report, and the TREASURER (Mr. J. Sturgeon) a statement, which showed that after all claims were met there would be a surplus. The constitution was then amended to allow of "assistant" members who may start business on their own account continuing as members of the Association, and to reduce the annual subscriptions to the following rates:—Honorary members, 10s. 6d.; assistants, 5s.; apprentices, 2s. 6d.

The following office-bearers were then elected for the ensuing year:—Honorary President, R. McAdam; President, J. P. Gilmour; Vice-President, J. Dickie; Secretary, M. Meldrum, Ph.C.; Assistant-Secretary, J. T. Lynn; Treasurer, J. Sturgeon; Committee: Messrs. Taylor, Williams, Rowan, Rodwell, Adams, Thomson, Wright, Walls, Davie, Grierson, Mackay, and Hannah.

Preston Chemists' Association.

A MEETING of this Association was held at the Bull Hotel, Preston, on March 29, Mr. W. Stewart in the chair.

The CHAIRMAN announced that the borough members had been communicated with respecting Clause 2 of the Companies Bill, and replies had been received from the Right Hon. R. W. Hanbury, M.P., Financial Secretary to the Treasury, promising to bring the points raised before the Minister who is responsible for the Bill, and from Mr. W. E. M. Tomlinson, M.P., who said his present feeling was that the clause ought not to pass in its present form.

Mr. ARKLE said the meeting had been called to pass a

resolution to the members of Parliament of the district, with a view to securing the

DISMISSAL OF CLAUSE 2.

The clause as it stood was absolutely at variance with all that was fair and just in the free practice of the profession by the registered chemists of the country. The training and examination required for registration were increasing in stringency and difficulty, and yet this clause proposed to allow the qualification and title of the individual to be usurped by a conglomeration of nonentities under the Companies Act. Chemists did not want a monopoly. They merely wanted everyone who claimed to be a chemist to enter the ranks by the front door. The company people were not in business on their own account. They were huge financial ventures, and had no more to do with the proper conduct of a pharmacy than the man in the moon. If Mr. Ritchie would not see any wrong in their conduct, then the profession must close its ranks, cease internal strife, put all personal grievances in the background, and go solid for the total exemption of Clause 2. He moved—

That this meeting is of opinion that Clause 2 of the Companies Bill now before Parliament should be opposed, with a view to its entire elimination from the Bill, and that the local, borough, and county members of Parliament be communicated with, urging them to do their utmost to prevent its passing.

Mr. WILLIAMSON, in seconding, said, despite the assiduous attention this much-debated measure had received, chemists still appeared to be some distance from the realisation of their dreams, but they were no longer the victims of uncertainty. The Minister in charge of the Bill had made it understood that Clause 2 was either to be included or nothing. This inclusion must certainly be prevented, because the success of Clause 2 would put limited companies in a better position than they occupied at present; therefore, they must strive to have it deleted. He was glad to observe that the Council had awakened to some sense of its responsibility. The omission of the insidious clause would not end their troubles, however, and would not alter the existing condition of things in the least degree. The salvation of chemists lay in fresh legislation. Their hope in that direction lay in convincing the public that they ran a serious risk in purchasing drugs and poisons from irresponsible persons. This would awaken the interrogatory instinct, and, that accomplished, half the battle would be won. The outcry would become so great that members of Parliament would have no alternative but to direct their energies towards sweeping away this most serious grievance. They were approaching the Council election, and the occasion had arrived to demonstrate in a very practical way what their views really were. He felt that no candidate ought to receive the support of pharmacists who was not prepared to favour a campaign calculated to relieve the profession of some of its burdens. Capable men were needed at headquarters—men who dare to speak, and, having given utterance to their opinions, to act. Those in the past who had failed to do what they required must be replaced, and then they would perhaps be able to claim that the Pharmaceutical Council reflected the opinion of chemists at large. Let chemists record their votes in that spirit, and their reward would be the dawn of a brighter day.

Mr. FISHER and the CHAIRMAN having spoken in the same vein, the resolution was unanimously agreed to.

Chemists' Assistants' Association.

At the meeting held in the rooms, Newman Street, W., on March 29, Mr. J. A. DEWHIRST, pharmaceutical chemist, submitted a series of

NOTES ON B.P. STANDARDISATIONS.

Mr. Dewhirst spoke from notes, but has since written the following:—When one turns to chemical and pharmaceutical literature concerning the determination of alkaloids in plants and their preparations, one is struck by the great amount of work that has been done on the subject, by the great similarity of the numberless processes suggested, and, again, by the conflicting accounts of the efficacy or otherwise of the latter. The differing constituents of a particular species of

plant, according to the nature of its surroundings during growth, the time of collection, the strength of alcohol used in making the extract or tincture, and the varying methods as to heat, &c., employed by manufacturers account for this discrepancy to a large extent. The "personal equation" of the analyst has a good deal to do with it. Details of manipulation employed by one, but considered too unimportant for publication, make his process quite unworkable by another, and hence the multitude of processes. After all we are dealing with only one mass of chemical substance, and consequently one process only might be expected to suffice for all cases. Speaking broadly, it does. Chloroform is undoubtedly the best all-round solvent of alkaloids, and where a liquid preparation containing one or more of them is made alkaline and shaken with it in two or three quantities, the alkaloids are extracted. Subsequent treatment of this chloroform solution with acidulated water extracts them again and leaves colouring-matters and other substances in the chloroform, whilst the alkaloids are now in a fairly pure condition in the aqueous solution, and can be dealt with according to the particular preference of the analyst. They can be precipitated by various reagents such as tannic acid, picric acid, iodine, mercuric or bismuth iodide in pressure of potassium iodide, or the precipitate decomposed and the alkaloid extracted in a pure condition. Or they may be titrated with standard solutions of the above. The results, however, are not reliable in most cases, and in the others there seems no advantage over the simple method of titrating the alkaloid residue with standard acid. Prescott has devised some rather elaborate methods of estimation by precipitation with standard iodine, filtering off an aliquot part and titrating the excess of iodine with thiosulphate. The somewhat uncertain composition of the iodine compound, and in cases the extreme dilution of the alkaloidal solution, probably introduce more error than in the above simple method.

A recent suggestion for the easy titration of coloured alkaloid residues consists in the use of an ammoniacal solution of copper oxide. Dissolve 10 gr. of copper sulphate in 500 c.c. of water, add ammonia till the precipitate first formed is nearly dissolved, filter, and dilute to a litre. Titrate a portion of this with standard acid to the formation of a persistent turbidity, and note quantity used. For an estimation 0.1 gramme of alkaloid is dissolved in 20 c.c. decinormal sulphuric acid, the flask placed on a black surface, and the ammoniacal-copper solution added to persistent turbidity. This shows the amount of acid left uncombined with the alkaloid.

Unfortunately, when the preparation to be standardised is shaken with chloroform and ammonia, troublesome emulsions are usually formed, which make the process either impracticable or a matter of days. This difficulty is largely overcome by a preliminary treatment with acid and chloroform, which removes some objectionable emulsifying matter. Indeed, the principle of shaking with ammonia or other alkali and the solvent, in the first place, may be considered as superseded by the acid-method. Other solvents—such as ether, benzene, petroleum ether, and amyl alcohol—separate from alkaline solutions better than chloroform, and they may be employed with the acid-method, but, as final extractors of alkaloid from alkaline solutions, they are, with the exception of amyl alcohol, unsatisfactory. Amyl alcohol has the disadvantage of a high boiling-point, and it requires heat and a reduced pressure or strong current of air to evaporate in a reasonable time and leave the alkaloidal residue in a condition suitable for weighing or titration. It is a recognised custom now to use only small quantities of the galenic for standardisation, and the resulting small quantity of alkaloid cannot be satisfactorily weighed in a comparatively large dish, which is condensing moisture from the air and getting heavier every moment. Moreover, time is taken up in drying the alkaloid perfectly, and in some cases one must be careful not to allow the temperature of the oven to rise above a certain point. All this is tedious and unnecessary. A fair idea of the alkaloidal yield is usually possessed by the operation, and a little check is obtained by a parallel determination.

Taking the Pharmacopoeia standardisations in alphabetical order we come to *belladonna* first. The B.P. method—shaking the liquid extract with chloroform and ammonia—produces intractable emulsions. To avoid them Alcock has

purposed a great improvement. He first shakes out with acid and ether, and then with a mixture of ether and chloroform, in the proportion of one to two, or more, with the addition of ammonia. The separations occur fairly readily, but in my experience ether or any mixture of it with chloroform is an incomplete solvent of alkaloid in this case and others. A subsequent shaking with chloroform alone will always extract a rather small quantity. Bird's preliminary shaking with chloroform and acid is excellent, and on treating with ammonia and chloroform the separation takes place even better than in Alcock's process. Bird recommends that the full B.P. process be then gone through, but this is not necessary. If the final chloroform is washed with a little water, the residue of alkaloid obtained on spontaneous evaporation is as crystalline and colourless as when the full B.P. method is followed. It is necessary to wash the first acid chloroform with a little water and add it to the bulk of the aqueous liquid, and then the alcohol of the preparation need not be removed as Wilson requires.

Dowdard has suggested a process involving the use of sand-percolation and the taking of an aliquot part of the solvent. The extraction by percolation through sand is not easy, using a reasonably small quantity of solvent, and the taking of an aliquot part is always an uncertain method.

Taking now the *cinchona* determinations with respect to the tincture and liquid extract, we have the treatment with potash and benzolated amyl alcohol. This again produces an emulsion. A more satisfactory method is the preliminary treatment with acid and ether, subsequently with ammonia and ether chloroform (1:2) twice, and finally with chloroform alone. The minimum of emulsion occurs, and the alkaloid is completely extracted. Stenhouse's method of extraction with a mixture of ether and chloroform in proportion of 9 to 1 gives a low result.

I think the process for determining the alkaloids in the bark needs revising. It is easy to get 500 c.c. of amyl alcohol by digestion and percolation, and then this quantity is directed to be extracted with 14 c.c. of acid-water until all alkaloid is removed. This is not readily done. A considerable quantity of acid is used: this has to be neutralised with ammonia, and the liquid concentrated to 16 c.c. Now, at this degree of concentration there is a good proportion of ammonium chloride present, and a sticky brownish deposit forms, containing much alkaloid. The crystals of the tartrates mix with it, and cannot be got out of the vessel on to a filter-paper. A volume of 24 c.c. appears to be low enough. A rough experiment with known weights of the alkaloids gave a sufficient weight of precipitate, and at this volume the brown deposit does not form. At best, however, the process is a large undertaking, and one dealing with smaller quantities would be a great improvement.

The B.P. determination of *ext. ipecac. liq.* is a more vexed question than any other. There have been many suggested modifications. First we have Wilson's, which relies on ether chloroform (equal parts) to extract all the alkaloid. Moreover, it ignores the alkaloid in his acid chloroform. Then we have Farr and Wright's, which produces bad emulsions. They have a quick method of extracting direct with chloroform and ammonia and titrating the residue. Again bad emulsions are formed, the residue is needlessly impure, and how they get a lower titration-value by a simple process I do not understand. The inference is that by going through two more operations more alkaloid is picked up from somewhere. Their precipitation by means of iodine gives an alkaloid by no means free from colour; this, and the fact that no solvent removing the whole of the alkaloid does so without taking up colour, and that the titration-value does not come up to the weight, seems to point to the presence of coloured alkaloid like that in *cinchona*—with a high-molecular weight. Naylor and Bryant's No. 4 process is an advance, but they do not direct the washing of the acid chloroform, and emulsion also occurs. Alcock's appears the quickest and best, yielding the highest results. Farr and Wright's statement that in titrating the residue the end point is sharp and precise is not confirmed by Henderson, Bird, or general experience; but I cannot agree with Henderson that weighing is superior to titration, whether the alkaloids are in unchanging proportion or not.

Bird stoutly upholds the B.P. process with the modification of heating the lead precipitate to cause aggregation and facilitate washing, but I fear the process will not be generally

used, official though it is. The question arises whether the use of another process is allowable, but the B.P. states that the extract must contain 2 to 2½ gr. of the alkaloids in 110 minims, and then directs the use of a process which might result in the production of an extract containing more than 2½ gr.

I have never had any particular difficulty with the B.P. process for the extraction of the alkaloids from *ext. nuxi vom. liq.*; but Alcock proposes his ether-method here also, and I have no doubt it works quickly. I would suggest, however, that he wash his ether solutions. The ferrocyanide process for the separation of strychnine and brucine is unsatisfactory. It has been pointed out that the concentration of the alkaloid solution is greater than that employed by Dunstan and Short; but even when this is remedied, the fact remains that both alkaloids are precipitated, and that no amount of washing will separate them. If washing be continued till bitterness ceases no alkaloid is left, and if it be stopped at any point the resulting alkaloid is found to contain brucine in an uncertain quantity. It is very unsatisfactory to weigh as strychnine what you afterwards prove to contain brucine. The nitric-acid process is most accurate. Use the B.P. process as far as the extraction with 30 c.c. of acid water, concentrate this to one-half, add 1 c.c. of nitric acid (1.42). In an hour make alkaline with ammonia, and extract with chloroform. Test-experiments made with known quantities of strychnine and brucine yielded 100 per cent. of strychnine when carefully done. A source of loss exists in the violent decrepitation of the strychnine on crystallising if due precautions are not taken. The brucine used in these experiments proved to contain the merest trace of strychnine.

In the case of *opium* no less a quantity than 14 grammes is directed to be used in standardisation. This is an absurdly large quantity, and in the case of the tincture one-seventh of the volume made is so employed. This must be a ruinous quantity for a retail man, and the B.P. is carefully compiled in these matters from the retail man's point of view. [Sarkastik, presumably.—EDITOR.] The filtering off of an aliquot part of the aqueous solution has undoubtedly been proved erroneous, and the allowance of a certain fixed amount of alkaloid for waste is an admission of error. The fact is that the quantity of morphine left in solution varies. I have found in it more than twice the amount allowed. It appears to me that a process on the following lines would be an improvement:—Take 10 c.c. of the tincture, add 5 grammes of lime, warm to cause aggregation, filter, and wash. The morphine is quickly all washed through; shake the liquid twice with benzene, washing the latter with a few c.c. of water. This benzene on evaporation gives a considerable residue of alkaloid from which lime-water extracts the merest trace of morphine. Then add ammonium chloride and a little ammonia to the aqueous solution, and shake out with hot amyl alcohol. If this is not done quickly, the morphine crystallises out, and is soluble with great difficulty in the amyl alcohol. The latter is easily evaporated with gentle heat and a stream of air through the containing flask. The residue is rather dark-coloured, but it can be titrated with ease in the B.P. manner, using litmus paper.

Mr. GAMBLE, in opening the discussion, referred to the thalleoquin test for quinine and the deterioration of preparations of *ipecacuanha*, especially the wine. He said that after listening to the paper they could not fail to be impressed with the fact that the B.P. estimations were very bad. He thought with such men as were on the B.P. Committee better results should have been obtained. There should, however, be more chemists engaged in the matter and fewer doctors. (Applause.) The estimations in the B.P. ought to be the best produced, and full advantage had evidently not been taken of the work previously done. Manufacturing chemists and others should be added to the Committee rather than have the present chaos.

Mr. HYMANS also complimented Mr. Dewhirst on his paper. There was one process, however, which Mr. Dewhirst had not mentioned. Lloyd's (American) process worked very well indeed for any extract containing a large amount of tannin. The process was to place a certain amount of fluid extract or drug in a mortar and triturate with 5 c.c. of liq. ferri perchlor., afterwards adding a large excess of bicarbonate of soda and shaking with chloroform. Practically all

the alkaloid is got out and the process works very well with ipecacuanha and belladonna. [This was disproved by a Committee of the Association to which Professor Lloyd communicated the process.—EDITOR.] With regard to the morphine process one could take half the quantities mentioned in the B.P.

DISCUSSION.

Mr. F. C. J. BIRD said that he had experienced a pleasurable surprise in listening to such an admirable paper. So many points had been raised that time would only permit of a few of the principal ones being alluded to. He quite agreed with Mr. Dewhirst that chloroform was the best general solvent for alkaloids, but he thought the author had misunderstood the purport of some recently published notes on the extraction of the alkaloids of ipecacuanha. His object was to show that the alkaloidal residue obtained in the assay of liquid extract of ipecacuanha consisted of two substances—alkaloid and a deep-brown substance of unknown composition sometimes forming 30 per cent. of the weight of the residue. Ether or ether-benzene dissolved out nearly all the titratable alkaloid, leaving the brown substance, whilst chloroform extracted both. Whether the brown substance should be included in the residue or not was a question for the future: if not, clearly chloroform was not the best solvent in that particular instance. Emulsification appeared to be the bane of most of the assay-processes, but could be generally got over in a very simple manner—viz., by pressure. Whenever possible, he acidified the diluted liquid extract and washed out fatty and resinous bodies with chloroform, and afterwards washed the chloroform with a little water. The solution was then made alkaline, and vigorously shaken with chloroform. A pledget of cotton or glass wool having been pressed down in the neck of the separator, the liquid was forced through the wool into another separator by adapting an ordinary rubber pressure-ball to the neck of the first separator with a tube and rubber cork. The clear chloroform was then drawn off from the second separator. The pressure broke up the emulsion. After an extended experience he had never known this method fail; it was particularly applicable to belladonna, cinchona, and nux vomica. He quite agreed with Mr. Dewhirst as to the unreliability of "aliquot part" processes for absolutely accurate figures. A little consideration would show that several factors combined to influence the result; but when a rough comparison only had to be made between several samples of crude drug such results were near enough for the purpose, and—excepting that for opium—the processes themselves were comparatively rapid. Certain alkaloids were affected by heat more than was generally supposed. The total alkaloids of ipecacuanha, for example, lost in titration value even when dried to a constant weight at the official temperature. In an ipecacuanha assay it was better, if the true titration figure were required, to carefully divide the chloroformic solution of the alkaloids into two parts, the one being dried and weighed as usual, and the other titrated, after removal of the chloroform in a current of air at the ordinary temperature—that was the most rational plan to weigh the alkaloid and check its purity by titration. With reference to the broad subject of Mr. Dewhirst's paper, he considered that standardisation as applied to pharmaceutical preparations was an ideal principle, but there were many practical difficulties in the way of its more general application, and he enumerated some of these, such as the different constituents of a drug, each determinable, but not all known to be inactive. The compilers of the Pharmacopœia had three courses open to them in dealing with nux vomica—either leave the preparations in the old unsatisfactory and variable condition, or fix on percentage of total alkaloid, or, as had been done boldly and wisely, insert a process for the separate determination of the strychnine. It was not certain that the B.P. process gave comparable results, and the clearing up of such points was an urgent necessity. This opened up a vast field of really useful work for the Research Laboratory of the Pharmaceutical Society. The energies of that institution had in the past been turned rather in the direction of pure chemistry, and he thought now that the time had arrived when pharmaceutical research might be allowed to come to the front. Mr. Bird also referred to the need in the B.P. for such physical details relating to galenical prepara-

tions as sp. gr., extractive, and colour. Here again was unquestionably a very useful, if humble, field for the work of the Research Laboratory, and he most earnestly appealed to them as members of an influential association to use their best endeavours to induce the powers that controlled the Research Laboratory to take this view of the question, and turn it to account for the purpose of pharmaceutical research. He trusted they would make it their duty to do all in their power to bring about this desirable result. With so many problems awaiting solution it seemed a great pity that such an ideal means of accomplishing really useful pharmaceutical work should be allowed to lie neglected.

Mr. MORLEY TAYLOR asked if Mr. Dewhirst could give him any reason for the red coloration in the peculiar sample of chlorine and quinine, on which he had read a note the previous week? (*C. & D.*, page 516.)

Mr. E. T. BREWIS, F.I.C., said he appreciated all the difficulties Mr. Dewhirst had. The question of emulsions was very difficult to get over. He had tried warming the solution (an American method), and then stirring with a rod on which a little stearic acid had been melted. Another method was to place the separator, which was a small one, into a centrifugal-machine and whirl it. The chemist who used that method had found it successful. He had also tried projecting a fine jet of steam into the chloroform with only partial success. As to the estimation of nux vomica, there was a method in use in the Midlands by which the liquid extract was evaporated with carbonate of soda, percolating the dry residue with chloroform. Strychnine is obtained fairly pure and the trouble with the emulsion is avoided. There was also the difficulty of the different kinds of liquid extracts. Mr. Bird had said you can get certainly two kinds of extract of ipecacuanha, one of which works easily and the other with difficulty. He used Mr. Bird's method with belladonna, and he found it worked very well indeed. (Applause.) In titrating the belladonna the best way was, as Mr. Bird had suggested, to use methyl orange, and in this respect he had met with the same difficulty as Mr. Dewhirst—there were methyl oranges of various kinds. As to the difficulties of drying the residues and getting them dark-coloured, he had also found that strychnine would bear heating very well. A round-bottomed dish was almost fatal—the best to use was an absolutely flat-bottomed dish with fairly high sides, and he got these specially from one firm. They were made to hold 100 c.c., and were as light as it was possible to make them. (Applause.)

Mr. DEWHIRST, in reply, said he could not say what the green coloration was after the thalleoquin test. He was not sure that it had a formula. With regard to the deterioration of ipecacuanha there was contradictory evidence, and he had read in the *American Journal of Pharmacy* of some preparations of scopola that had been made thirty years and were still found to be of proper strength. As to the estimations of the B.P., possibly the methods were good at the time they were put in, but they had improved upon them since, and at the same time won a little glory and had a knock at the committee. (Laughter.) The research-laboratory of the Pharmaceutical Society was quite a failure, in his opinion. There was an enormous amount of work left undone. The Americans far out-distanced us in that respect. He had been at the back of the making of the Pharmacopœia, and he knew how things were copied, with very little estimation, if any at all. As regards taking a half quantity of B.P. opium, if that could be done, why was not a half put in? It was an instance that showed the general want of activity in these questions. He differed from Mr. Bird's method in the use of a mixture of ether and benzene, which left in 5 or 10 per cent. of the alkaloid. That did not seem right when chloroform took it all out. He noted Mr. Bird still used his ipecacuanha process. He (Mr. Dewhirst) did not think the lead-business good. Purification by shaking out with acid and chloroform instead of lead was quicker. The question was, Were they to use the B.P. method when there was a better method? For his part he used the better method. In his firm they did not throw away alkaloid. (Laughter.) As to Mr. Morley's red coloration in his experiment, he thought that was perhaps due to the peculiar atmosphere. (Laughter.)

A vote of thanks was accorded Mr. Dewhirst for his paper, and the meeting adjourned. We ought to add that the attendance was the largest of the session.

Manchester Optical Society.

At the annual meeting of this Society, on March 28, Mr. G. Bennett was re-elected Chairman. It was decided that members should not use the title of the Society as a means of advertising, and it was also resolved that the Society become affiliated with the West Riding Optical Society.

Tunbridge Wells and District Chemists' Association.

THE annual dinner was held at the Castle Hotel on March 28, Mr. Gower (President) in the chair. An excellent musical programme was carried out, songs and instrumental music being given by Messrs. A. E. Hobbs, Warrick, Oliver, F. Hobbs, Burgess, and S. V. Booth.

At the meeting of the Association earlier in the month, Mr. E. Dunkley presiding, it was decided to forward to the local M.P.'s the circular-letter relative to the Companies Bill sent by the Federation, together with Clause B. The following officers were elected:—President, Mr. Gower; Vice-President, Mr. O. Rogers; Treasurer, Mr. Ogle; Secretary, Mr. S. V. Booth; Committee, Messrs. Hobbs, Pearmund, and Wardley. Mr. Dunkley and other retiring officers were thanked for their services, and a donation of 1*l.* 1*s.* was voted to the Benevolent Fund.

Dewsbury Chemists' Association.

A MEETING was held on Monday evening, April 2, at the Church House, Dewsbury, the President (Mr. Stead) in the chair. The chief business was to hear an address by Mr. R. Lord Gifford. There was a good attendance, including Mr. H. Sykes, of Huddersfield, and Mr. S. N. Pickard, of Bradford.

The PRESIDENT thanked the members for electing him to that position at the last meeting. He also remarked that Mr. Gifford, like the Dewsbury Association, was always getting into hot water, and was trying to get into a position that would get him into a little more.

INTERVIEWS WITH LOCAL M.P.'S.

Mr. WALKER (Cleckheaton) stated that a deputation had an interview with Mr. T. P. Whittaker, M.P. for Spen Valley, and submitted to him that it was a great injustice that men should have to qualify at great expense to compete with men who had "jumped over the wall." Mr. Whittaker contended that so long as companies employed qualified men and the public were protected that was all that concerned Parliament, but he (the speaker) pointed out that in the stores were the scum of the trade, and that it often happened that several men who could not get through their examinations were employed and one qualified man. After further discussion, Mr. Whittaker admitted that there was a grievance, but did not think Parliament could interfere so long as the public were protected.

Mr. R. GLEDHILL stated that he had sent a memorial, signed by all chemists in Dewsbury to their M.P. (Mr. M. Oldroyd), who stated that the suggested clause was so clearly explanatory of their position that an interview was unnecessary. A similar memorial had been sent by Mr. J. W. Cussons (Ossett) and Mr. A. R. Briggs (Horbury) to the members for the Morley and Normanton divisions respectively.

The PRESIDENT said that he urged upon Mr. Whittaker that in 1868 the Government entered into a solemn contract with chemists, who had done more than was required of them to secure the safety of the public, and it was unfair for the Government to try to back out of it.

MR. GIFFORD THEN ADDRESSED THE MEMBERS.

He emphasised the necessity for immediate action, and said the Council's greatest crime was delay. The Act of 1868 had become a grotesque travesty of what it was intended to be, and the question was whether it should continue to be made effective as intended. It did not represent "official thought," and the Society had viewed it with contempt, and been vaguely striving to bring the profession more in harmony with the aspirations of the fathers of Pharmacy;

while the Council had been striving for the moon, the Act had been made a plaything of. Chemists had regarded their subscription to the Society as a wasting of guineas. After a reference to the effect of the Pharmacy Act, 1898, he alluded to qualification, mentioning a disposition in certain fossiliferous regions to depreciate the Minor qualification to a trade level, and to look to the Major qualification as the professional one. There was no possible suggestion of inadequacy of the Minor qualification, while the Major one was purely voluntary and ornamental. Turning to the amending proposals, he said in regard to qualified management that it made the qualification one for exploitation, while it gave away the principle, and if the essential personality of the qualification were lost, nothing but the contemptible qualified management would remain. His impression was that the Dewsbury Association had some sympathy with the qualified directorate. He admitted that if the proposers could have their way (an extraordinary proviso) they would bring about the state of things he desired, but it had the fatal fault that it gave up the principle of personal qualification. If they allowed that corporations could exercise their prerogatives, Parliament would see that no conditions were imposed to make that exercise impossible. It was Mephistopheles, he thought, who originated the idea of qualified directorate. (Laughter.) Mr. Gifford then referred to Mr. Martindale's speech at Liverpool, and urged, in contradistinction to it, that they should fight hard for the rights intended to be granted by the Act of 1868, which policy would focus the issue—the objection to Clause 2 and the necessary corollary inclusion in Clause 3—which would make the Pharmacy Acts effective. Supposing these clauses were dropped (and they might not be), he would have an amending Act ready, seeking to make the Act of 1868 effective. It would also be necessary to tackle some of the clauses of that Act. He also suggested that the Watch Committee should scatter broadcast a statement of the arguments of the case, asking chemists to impress them on members of Parliament.

Mr. R. GLEDHILL moved a resolution recommending the members of the Association to support Mr. Gifford's candidature for the Council. He spoke of the need of men on the Pharmaceutical Council who were more in touch with provincial chemists, and expressed the opinion that if the Council had tackled the question sooner there would have been no Companies Bill. But the Council had been dormant long enough, and were played out. The chemists ought to fight strenuously for their titles, in the first place. He explained that the Association, in adopting the principle of qualified directorate, looked upon it as taking the lesser of two evils.

Mr. BROADHEAD (Batley) seconded, and expressed a preference for Federation Clause A over Clause B. For the present state of affairs he did not altogether blame the Council, who were in an awkward position; and it was difficult to ascertain what the views of the chemists generally were, and to discriminate between the multiplicity of ideas. The only panacea seemed to be vermin-killer. (Laughter.) Speaking of existing anomalies, he said they had a Council and a representative journal, but members of the trade took their cue in everything from the *C. & D.*, and that led to confusion. The man who was declaring from the housetops how the business should be conducted was not a chemist, but a cabinetmaker. That was another anomaly. He criticised from the inside, and did not think the *C. & D.* cared a jot for his opinions, so long as he paid his subscription. The *C. & D.*, however, had in its *clientèle* a large number of unregistered men, paying their subscriptions and robbing those who complied with the Pharmacy Act. [We give this ancient relic publicity, in order to deny the obvious implication.—EDITOR.] It was the duty of all qualified men to join the Society, instead of taking their views from the *C. & D.*

Mr. PICKARD also spoke, and Mr. GIFFORD replied to one or two questions. Ultimately the motion was carried unanimously.

Plymouth on Companies.

A DEPUTATION from the Plymouth and District Chemists' Association, consisting of Messrs. C. T. Weary, C. J. Park, and G. Breeze, waited upon Messrs. Kearley and Morton, the

Parliamentary representatives of Devonport, last week, and put before the hon. gentlemen their objections to the Companies Bill. Messrs. Kearley and Morton conjointly expressed the opinion that chemists could make a strong plea in insisting upon protection of the titles. They thought further that registered chemists might reasonably ask that the dispensing of medical prescriptions and the sale of scheduled poisons should be restricted to them, by inclusion in Clause 3, as in the case of surgeons, dentists, and midwives. They recommended that a strong effort be made to get Clause 2 struck out of the Bill, or, at least, the words "or to use the term or definition of 'pharmaceutical chemists' or 'chemists and druggists.'"

Forfarshire and District Chemists' Association.

A MEETING of this Association was held at Mather's Hotel, Dundee, on March 23. Mr. Chas. Kerr presided, and there were present Mr. Storrar (Kirkcaldy), Mr. Currie (Glasgow), Messrs. John Anderson, Booth, Cummings, W. Doig, J. Doig, D. Ferrier, J. Russell, Milne, and Taylor (Dundee), Bennett, Buchan, Naysmith, and White (Arbroath), Fleming and Park (Broughty Ferry), Walker (Downfield), Macfarlane (Forfar), Ford (Kirkcaldy), Peebles and Thomson (Lochee), Harley (Perth), Kermath (St. Andrews), Marshall (Tayport). Apologies were received from Messrs. J. Rutherford Hill (Edinburgh), Davidson (Montrose), Jack and Robertson (Arbroath). After tea Mr. KERR first thanked Mr. G. J. Seabury, of New York, on behalf of the Association, for sending to each of their members a copy of his book "Should Pharmacists become Tradesmen?" He then referred to the steps which had been taken on their behalf to oppose Clause 2 of

THE COMPANIES BILL.

Shortly after their meeting in November a protest was sent to the President of the Board of Trade, and he (Mr. Kerr) and the Secretary afterwards had an interview with Sir John Long, M.P., previous to his resuming Parliamentary duties. Further, letters had been sent to Mr. Edmund Robertson, Mr. John Morley, and Captain Sinclair, at the House of Commons, inviting their attention to the matter. Mr. Kerr thought now that the Pharmaceutical Council had decided to oppose Clause 2, it was their duty as an Association to support them. But he hoped they would not stop there. They had been looking to the Council for years to get the Pharmacy Act amended, and a serious attempt ought to be made in that direction without more delay.

Mr. KERMATH proposed that the meeting homologate the action of their Chairman and Secretary in the steps they had taken on this question. It was a case for prompt action, and it was necessary that they should move on their own account. He would insist upon that, though it did not seem to please some members of the Council. But let the Council show a little more backbone, and take members a little more into their confidence if they had anything to confide. There was too much waiting to see what would turn up. Hesitation and procrastination had had a long innings, and as a result we had lost positions we should have held. He wished to take that opportunity of refuting the statement attributed to Mr. Ritchie that chemists were running branches with unqualified managers. In the district of Fifeshire, of which he was local secretary, there was no example of that. He thought it was a strange argument for Mr. Ritchie to use, even if there were any truth in it.

Baillie DOIG, in seconding, said they were quite within their rights in addressing their grievances to the highest authorities at any time, and thanks were due to their Chairman and Secretary for their action. He moved—

That this meeting approves of the decision of the Pharmaceutical Council to oppose Clause 2, at the same time urging the Council to take immediate steps to obtain an amendment of the Pharmacy Act.

Mr. NAYSMITH seconded, and

Mr. STORRAR, in supporting the resolution, gave a summary of the reasons which led to the recent decision of the Council. He said he had been again nominated for the Council. He had served for ten years, and thought he should now retire to allow some others to share the work of the Council. He had not yet accepted nomination, but if

he thought anyone was coming forward to challenge his actions he was prepared to accept the challenge.

Mr. CURRIE assured Mr. Storrar that when he accepted nomination he was sure that no support would be given him at the expense of Mr. Storrar. He (Mr. Currie) thought they in Scotland took a broader view of the companies question than their English friends. The Council was certainly lax in giving no lead. What was the Council there for? They had lost many opportunities. He would have them go strongly for restriction of titles and effective control of companies.

Mr. WALKER moved an amendment, but, as he failed to find a seconder, the resolution was put to the meeting and carried.

TO POSTPONE THE NEW PRELIMINARY EXAMINATION.

Baillie DOIG wished to know if it would be possible to suspend the coming into operation of the new Preliminary examination. He said they were going to be face-to-face with a serious difficulty in getting apprentices. The present race was quite unable to meet the new conditions which seemed for the time being unnecessarily high; and this would be so until secondary education, which was only developing, began to tell upon the youth of the country.

Mr. STORRAR sympathised with Baillie Doig's remarks, and thought a representation should be sent to the Council. He had been making inquiries, and was able to confirm what had been said. No lad would be able to face the examination until after two years' further study.

Baillie DOIG moved—

That this meeting would respectfully memorialise the Pharmaceutical Council to consider the propriety of suspending the operations of the new regulations for the Preliminary examination for a period, say, of five years, until the standard of secondary education has so advanced that youths may be more able to pass the higher examinations now proposed; otherwise chemists, in country districts especially, will have great difficulty in obtaining apprentices.

This was unanimously agreed to.

Mr. KERMATH gave notice of the following motion for the next meeting—

That the time has now arrived when the method of conducting the Minor examination should be altered, and that the same rules should apply as obtain in medicine and law—namely, that candidates be credited with the subject or subjects on which they obtain pass-marks.

A vote of thanks to the Chairman closed the meeting.

Halifax and District Chemists' Association.

ON March 21, before a good muster of members, at the Old Cock Hotel, Mr. CLEMENT FIELDING read a paper on "Pharmaceutical Malthusianism." He explained the application of Malthusianism to pharmacy, which virtually amounted to limiting the supply by curriculum and examinations, weeding out the unfit; also taking only the well-educated youths as apprentices. He advocated "specialisation" as a remedy to the growing evils that threaten the profession. Messrs. BRIERLEY, DIXON, HEBDEN, and TIFFANY joined in the discussion which followed. A hearty vote of thanks was accorded to Mr. Fielding.

N.Y. LEGISLATIVE PROGRESS.—The compulsory poison-bottle Bill introduced into the New York Legislature by Senator Wilcox, and to which we have referred on several previous occasions, has been squelched.—Senator Henry's Bill to regulate the working-hours of drug-clerks in New York City has been passed by the Assembly. In the Senate it was ordered to a third reading, and referred to Committee.

THERE is about to be started in Monrovia, California, the first perfume-farm and perfume-manufacturing plant operating on an extensive scale that has ever been established in the United States, some thousands of acres having been bought for the purpose in Southern California. Expert German and French chemists have already been engaged, and this spring the plant, it is said, will be in operation. Several New York and Chicago capitalists have the matter in hand, and it is intended to organise a stock-company, incorporated under the laws of Illinois.

Observations and Reflections.

By XRAYSER.

MR. MARTINDALE will find it dangerous to rest his defence of the Council's inaction in regard to the Companies Bill on the past utterances of Mr. Carteighe, as he did at Liverpool. Even the passage he quotes from Mr. Carteighe's speech is an indirect, but not the less a powerful, argument against the Council's irresolution. Mr. Carteighe had a Pharmacy Bill in his pocket for which he wanted the sympathy of Parliament, and his contention in reply to those who wanted him to add a clause controlling company-pharmacy was that such a clause would jeopardise, and indeed ruin, the chances of the rest of the Bill. But, said he in reply to his critics, "it is just possible, if ever we get the Bill into Committee, that we may be able to insert a clause against limited companies practising pharmacy." This hint, in one form or another, he repeated at many meetings. And how does this advice apply to present circumstances? There is a Bill before Parliament dealing, under Government auspices, with the very grievance which Mr. Carteighe said could only be got before the House of Commons by a sort of sidewind. But now the clause is before Parliament Mr. Martindale, basing his views on Mr. Carteighe's wisdom, says, Let us avoid it; make no attempt to amend it or even discuss it. All we can do is to oppose it, and ask the Government to abandon it. Then the ground will be clear, and we will bring forward our own Bill with a clause such as we should like. Exactly the course which Mr. Carteighe urged would be fatal to success.

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DR. MCWALTER'S ALLEGATION concerning Powell's balsam of aniseed will probably be replied to by the proprietors of that medicine. It certainly demands notice. It may be that a proprietor is legally at liberty to do what he likes with his own in a case like this, though I am not sure that this would be held in respect to an article which had acquired popularity. Certainly it is a most objectionable thing from the point of view of the consumer to essentially change the character of a medicine which has gained a reputation of any degree on its original composition without due notice to the purchasers of the article.

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QUALIFIED ASSISTANTS should take note of the suggestion offered in last week's *C. & D.* by "A Rank Outsider." I understand him to recommend that they should raise the price of their services when they sell these to limited companies. That is by a long way the most practical proposal that has been offered on this subject. Qualified men are essential to companies who practise pharmacy. To ask them to pledge themselves to refuse engagements with companies is as unfair as it is hopeless. If a few chivalrously sacrifice themselves in this way, the only effect of their self-abnegation is to make the chances better for those who have no such scruples. Some have suggested, in apparent seriousness, that taking service with a company should be regarded as "infamous conduct in a professional sense," and should involve the withdrawal of the certificate. To say that such a condition could only be obtained with the sanction of Parliament suffices to dispose of it. But a combination of those concerned to insist on a minimum salary 25 or 50 per cent. higher than is now paid by companies would be sure of success, and it has the great advantage that unanimity is not essential. Say there are a thousand qualified men available for the companies to tempt. If the whole united, they could obviously make what terms they pleased up to the limits of the companies' financial capability. But if only half would pledge themselves to insist on a determined

advance, the market-price for their services would rise automatically, and only the silliest Johnnies would be content with a rate below that which they could secure if they chose. The assistants would benefit all round, and so would the legitimate chemists, and, as "Rank Outsider" asks, if the companies had to charge a little more for their goods, need we regard that as a calamity?

* * * *

THE COMPANY NEWS of last week is interesting. The colonel, the captain, and the authors who are associating with a Mr. Thomas Holloway, a patent-medicine manufacturer, to exploit an invincible embrocation, will find their 1,100% capital go a very little way towards conquering the much more invincible public.—The assorted lot of Manchester men, who are now the happy proprietors of such discoveries as kaufcure, castrol sirop, hairoline, restorum pills, and the tempting "&c.," are also, I expect, some of those sanguine people who believe that there is no royal road to wealth so short as that of advertising a proprietary medicine. Their 3,000% will come in useful to a few newspapers and magazines. May I point out, for the benefit of any other hopeful people who are thinking of venturing their money in this business, that the gross returns to the makers of stamped medicines in Great Britain (the figures are based on the Inland Revenue reports) cannot exceed one and a half million sterling, and that out of this sum the stamps have to be paid for, all the dazzling showcards, the vast mass of costly advertisements which meet us in every publication, the handbills, the labels, the boxes, the bottles, and the medicinal materials—though it may be that this last item is almost too insignificant to be worth naming? The few fortunes made in the trade have also to be deducted from the total, as well as the establishment and manufacturing expenses. If all these items could be correctly totalled, it would be seen that not much remained to be shared by the small men.—The misfortunes of the Ulster Chemists (Limited) will not encourage investment in this class of enterprise in Ireland. It is, however, curious to note that one of the principal organisers of this unfortunate company has gone to the rescue of a similar association in England which has likewise fallen on evil days.

* * * *

CASUALTIES is a less brutal word than killed, and I commend it to the Lords of the Privy Council as a suitable term for them to employ if they should be called upon to explain once more why they still refuse to make use of the machinery which the Legislature devised to check these four or five hundred deaths a year from unscheduled poisons. The carnage in South Africa which we read of every morning blunts our sympathies with the paltry average of 200 deaths per annum from carbolic acid, but these go on from year to year. They are, to a large extent, preventable; they involve untold agony, and no prospect of glory. An occasional question in Parliament, a resolution recorded by the Council of the Pharmaceutical Society once in five or ten years, an article now and then in a trade newspaper—none of these is of any use unless followed up by determined subsequent action. It is the duty of the Pharmaceutical Council above any other body to take that action and wring some semblance of humanity from the Privy Council.

THE NEW DOCTOR.—Henpekt: "That new doctor you introduced me to, Bowler, is a great symptomotologist—great student of human nature." Bowler: "Suits you, does he?" Henpekt: "Thoroughly. Had him last night to treat my wife for a cold, and he said she didn't need any medicine, but that she must be partiuklar, above all things, to keep her mouth shut and breathe through her nose."

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Editorial Comments.

The Council Contest.

THE chief item in the Pharmaceutical Council meeting at Bloomsbury on Wednesday was the announcement that for the seven vacancies on the Council seventeen nominees are prepared to seek the suffrage of the electors. It would be idle to deny that this is an occasion of special significance. Ten new men do not accept nomination without feeling that there is need for change in the constitution of the Council, and it is known that some nominees are acting more or less in concert, but even those who are acting quite independently are convinced, perhaps the most convinced, that the Pharmaceutical Council urgently requires their services. It is the electors who must decide whether the seven gentlemen who are retiring from the Council, and who seek re-election, will be returned again. Of the services of these gentlemen and their attitude in regard to the question of the day we hope to speak before the voting-papers are issued;

meanwhile the question which requires attention is, Why should the Pharmaceutical Council be reformed? We do not hesitate to say that the retiring councillors are as honest men as the ten new men who seek election. Some of them have prolonged experience of Council work, and entered upon the duties with a determination to serve the trade irrespective of Bloomsbury tradition, but in every case they have sooner or later succumbed to the influences of that tradition. Therefore they cannot have acquiesced in the present amorphous policy without consideration, especially of precedents, yet the head and front of their offence is that they have had more respect for the past than the present. Mr. James Reid, a powerful protagonist of the chemists' cause, who has declined nomination, tells us to-day that he feels he can serve his colleagues better off the Council than upon it; and so it is with many provincial chemists, who know the condition of the trade well, but are in the dark as to the force they have to contend against in the central body at Bloomsbury. This is the Pharmaceutical Society's real danger. The Society is a body of some six thousand men throughout Great Britain, who are banded together for their own improvement and protection, and for the advance of pharmacy, but they are beginning to find a little too late that the Executive of the Society is chiefly concerned in the elaboration of an idea which was formulated in the year 1841 for west of London circumstances. In this year of grace 1900, the circumstances are vastly different, and five-sixths of the members of the Society reside outside London. Has the Council of the Society been in touch with the five-sixths? The provinces say "No," and we think it would be difficult to select from the six thousand a party of sixty representatives of the country who could sit down on terms of familiarity to discuss the Society's affairs. This is a particularly unhealthy symptom in a body which is representative of Great Britain, which is wealthy, has an influential membership, and is charged with the administration of an Act of Parliament. The old traditional feeling of exclusiveness is the Society's worst enemy. It is that which causes the central authority to take umbrage at reasonable criticism, and to view with horror the replacement of old councillors with new men, and it is high time that this feeling should be neutralised. As past experience gives little hope of this being done from within, the members had better begin from without, and insure the return of candidates who are pledged to give greater consideration to the needs of the provinces, and to assist in formulating some system whereby greater use may be made of the political force of the members. It would be unfair to say at this stage that this can best be done by the return of seven new members; those who are retiring deserve a hearing, and we want to know more about the new men than has yet appeared. Is each one qualified to act as an administrator? Is he a man of business methods who can take up the work of the Society, and improve the way in which it is conducted? Is he prepared to make the most of the Pharmacy Act? This Act is the heritage of the drug-trade. It demands the qualification of the individual, and holds out as an inducement to qualification certain privileges which are known to be openly violated by the unqualified. We want men on the Council who have the judicial nous to administer the Act; they must be men of affairs, men of business, and not mere enthusiasts for the druggists' rights—commendable as that virtue is.

A Ray of Hope.

THE meetings at which the pharmacy clause of the Companies Bill have been discussed during the past week were

ordinary Winter-session meetings, and are included in the section of this week's issue. All the speakers traversed familiar ground, and it is interesting to note that from widely different parts of the country there is unanimity on three points: (1) the Pharmaceutical Council has not led the trade properly; (2) Clause 2 should be opposed; and (3) a new Pharmacy Bill should deal with the pharmacy-company question. It looks uncommonly like a beginning of the same thing over again—parrot-like talk in one groove, and aiming at the impossible. There is real danger in seeking salvation in the future rather than in the present, and, we are happy to say, the policy which we have commended to our subscribers—that of quietly but persistently telling their parliamentary representatives what exactly is the case for the chemist, and how Clause 2 may be turned to their good—is having effect. Mr. Ritchie appears to have stopped saying that he will drop the clause if it is opposed for he has written this week to a member of the House stating that "due consideration will be given to the various representations that have been received when the Bill is in committee." It is a distinct step in progress to have the Minister who has charge of a Bill promise to consider amendments after it has been put on record that he had stubbornly refused to do anything of the kind. The line of action which the Pharmaceutical Council (Great Britain) has given to the country is one which abandons the present opportunity of getting a remedy. Mr. Ritchie's changed tone indicates how weak a position the drug-trade of Great Britain will be in when the amendments to Clause 2 come on for consideration. The trade of Ireland is not so prejudiced, for the Council in Dublin has taken the wise course of arranging for amendment of the clause. If, in view of all the circumstances of the case, and the practical impossibility of getting an amended Pharmacy Act, chemists in the provinces relax their efforts to get the necessary reform now, they may be prepared to put up with the present condition of things for ever.

More About Sandalwood Oil.

A FURTHER important contribution to the chemistry of this oil, the variety known as "West Indian," is published in the current issue of the *Archiv der Pharmazie* by Deussen. This oil, although known as "sandalwood oil," is not a product of the *Santalaceæ*, but is obtained from one of the Venezuelan *Rutaceæ*, and after a critical examination Mr. E. M. Holmes recently called the plant *Schinus oleifer*, in honour of the Leipzig firm of distillers; but Urban has since shown that the plant is in reality a member of the genus *Amyris*, and it is now known as *Amyris balsamifera*. The oil distilled from the wood of this plant differs from the true, or East Indian, oil of sandalwood, (1) in its lower specific gravity, (2) in being strongly dextro-rotatory, and (3) in its lower content of alcoholic constituents, as estimated by Parry's method. The oil used by Deussen had a sp. gr. 0.982 and an optical rotation of +27.18° at 20° C. Carbon and hydrogen estimations showed its composition to be C=82.48 per cent.; H=11.24 per cent.; O=6.18 per cent. Under atmospheric pressure the oil commenced to boil at 265° C. with partial decomposition. By distilling under a pressure of 23 mm. the following fractions were obtained:—

- | | |
|----------------|----------------|
| 1. 139–147° C. | 4. 160–168° C. |
| 2. 147–155° C. | 5. 168–171° C. |
| 3. 155–160° C. | 6. 171–174° C. |

Of these fractions 2, 4, and 6 were the largest. Nos. 2 and 4 were "combusted," and the molecular weight was also determined by the freezing-point method. The following

D

results were obtained:—(2) Carbon = 85.21; H = 11.45; mean molecular weight, 196; (4) carbon = 82.59; H = 11.59; mean molecular weight, 191. These results are in each case in agreement with the supposition that the fractions were mixtures of a sesquiterpene and a sesquiterpene alcohol. The oil (about 50 grammes) was then diluted with twice its volume of dry ether, and, being kept cool all the time, was saturated with dry hydrochloric-acid gas. The mixture became reddish-brown in colour, and after three to four days needle-shaped crystals began to appear. After eight to ten days the crystallisation had materially increased. The ether was then evaporated, leaving a crystalline residue. After freeing the mass from adhering oil and other impurity, and recrystallising from acetic ether, the crystals were obtained in a pure form. They were white needles, melting at 117°–118°, and contained 25.65 per cent. of chlorine ($C_{15}H_{22}2HCl$ requires 25.63 per cent.). The molecular weight was found to be 276.9, whilst a sesquiterpene dihydrochloride requires 277. The specific rotation was -33.65° , whereas Wallach found 36.82° for cadinene dihydrochloride. The sesquiterpene present is, therefore, clearly shown to be cadinene. The dihydrobromide as prepared in an exactly similar manner, and formed white needles, melting at 124° – 125° , of the formula $C_{15}H_{22}2HBr$. The specific rotation was found to be -36.26° , as against Wallach's -36.08° . The dihydroiodide formed white needles melting at 105° – 106° . The curious point about all this, which requires clearing up, is that cadinene is strongly levorotatory, $[\alpha]_D = -93.6^\circ$, and, according to Deussen, it is present to the extent of 16–17 per cent. The oil, however, is strongly dextrorotatory. Either the remaining constituents of the oil are very highly dextrorotatory or the sesquiterpene suffers inversion by treatment with the halogen acids. This paper, like the one which we recently commented upon, marks a distinct advance in our knowledge of these oils, and the discovery of cadinene as a constituent may have some influence in ultimately settling the constitution of the so-called "santalol."

A USEFUL PAMPHLET.

The medical officer to the Islington Vestry has drawn up, and caused to be distributed to tradesmen in the parish, a useful little seven-page pamphlet, explaining the principal points of the Sale of Food and Drugs Acts, 1875 to 1899. The attention of chemists, grocers, provision-dealers and others is directed to the various offences under these Acts and the penalties attaching thereto, and shopkeepers have thereby a clearer conception of what is expected of them, and are better equipped for avoiding legislative pitfalls than heretofore. This action on the part of the officials is to be commended to other authorities throughout the Kingdom, for it is not only fairer to the trader, but will preclude all pleas of "ignorance" when a *bonâ-fide* prosecution is instituted.

P.A.T.A., PLEASE NOTE.

We observe that the *Pharmaceutical Era* of New York reports that J. C. Ayer & Co., Lowell, Mass., C. I. Hood & Co., of the same town, the Lydia E. Pinkham Medicine Company, of Lynn, Mass., F. E. & J. A. Greene, of Boston, Mass., and the Wells & Richardson Company, of Burlington, Vermont, have adhered to "the National Association of Retail Druggists' programme, and are to confine the sales of their products to the accepted list of jobbers approved by the joint retailers, wholesalers and proprietors' associations, and will refuse to sell to anyone outside of this list and to any included in fit who shall be found guilty of supplying aggressive cutters, department stores, brokers, and price-cutters generally in violation of the agreement made." Some of these products sell in the United Kingdom.

"M.A.P." AND CHEMISTS.

Influenza victims may breathe freely at last. The Parisian public-benefactor who promotes the *entente cordiale* between Britain and France in the pages of *M.A.P.* has forwarded to his chief a cutting from the *Gaulois* newspaper giving Dr. Borne's prescriptions for influenza. This T. P. publishes in the current issue of his smart journal in deference to "requests from readers all over the country." But, mark ye:—

For the convenience of my correspondents I am printing them in English measure, for, although *THE CHEMIST AND DRUGGIST* has been very angry for two weeks running with my Paris correspondent for saying it, it is true that English chemists don't care to handle French prescriptions unless they have a French assistant. My ably-edited contemporary surely forgets, in its pique with the writer of "*M.A.P. in Paris*," that it is one thing to *know* the decimal system and the French names and Pharmacopœia strength of drugs, as every good English chemist does, and another to be able to dispense a French prescription with ease, rapidity, and accuracy born of lifelong practice.

We cannot conceive where T. P. obtained his extraordinary knowledge of chemists. We assure him, with all deference, that any English, Scotch, or Irish pharmacist of good standing would be delighted to dispense—rapidly and accurately—as many French prescriptions as he cares to submit to him. But all this is beside the case. The main point of our comment (*C. & D.*, March 17, page 468) was to draw attention to the statement that several Parisian pharmaciens had been guilty of fraudulent substitution in the preparation of Dr. Borne's prescriptions. That accusation has neither been substantiated nor withdrawn.

A PRESCRIBER ON PRESCRIBING.

Professor Carter, M.D., F.R.C.P., of Birmingham, has been indulging in the delightful pastime vulgarly known as "spreading himself out." In his address to the Midland Pharmaceutical Association on the place of drugs in the treatment of diseases i.e. amongst other things, introduced our modest "*Diseases and Remedies*." He heard about this book in May last—from Sir James Crichton Browne, we dare say—and his indignation at the book having apparently been bottled up ever since, it came out last week with a fierce gush, which nothing but words like "balderdash" and "nonsense" would satisfy. Professor Carter spoke of the book in general terms only, and his remarks are a reflection upon chemists and druggists rather than on *THE CHEMIST AND DRUGGIST*. Why should not they have a book of medicine written for themselves? The public have family-medicine books, and physicians have their text-books, but neither kind suits chemists and druggists. We have provided what was wanted, and it has given satisfaction. Professor Carter stopped his quotation from the preface at a point which was convenient to him, but unfair to us. We complete the quotation:—

On the much-vexed question of counter-prescribing, it may be said, first, that there is counter-prescribing and counter-prescribing—that there is an illegitimate form of it which should never be practised, and which it is believed that those who do practise it know to be illegitimate, but that there is another form which is not only legitimate, but necessary and inevitable, and which is conducive to the best interests of all concerned. But it may also be affirmed with confidence—and this is really the justification of this treatise—that the more the pharmacist knows of disease, of its symptoms and issues, the less eager will he be to assume carelessly the functions of the medical man.

"*Diseases and Remedies*" has admirably fulfilled its intention, and not a single instance of malpractice has arisen through its use.

FOR THE FRONT.—Mr. E. Swindells, an assistant with Mr. W. Harsant, chemist and druggist, Epsom, who is going to the front for service in the Army Medical Corps, has been presented with a compact dressing-case by members of the Epsom Young Men's Christian Association.

Scientific Progress.

The Occurrence of Dulcitate in *Euonymus*.—Hoehnel has shown that the carbohydrate alcohol existing in *Euonymus atropurpureus* is dulcitate and not the isomeric mannite as previously stated by Paschikis. The presence of this body in *Euonymus europæus* has long been recognised (*Pharm. Zeitung*, 1900, 22).

Pomegranate-bark Alkaloids.—Ewers recently examined a number of commercial samples of pomegranate-bark, and stated that the root and stem barks contained practically the same amount of alkaloid, the quantity being fairly constant between 0.5 and 0.7 per cent. He now points out (*Archiv. d. Pharm.*, 1900, 238, 8) that the samples referred to were of South European origin, and that the higher results published are probably due to the use of Java bark, and that low results are due to the employment of old bark. A sample of the Java root has now been obtained, and four estimations yielded 0.97, 0.92, 0.98, and 0.95 per cent., which is not appreciably higher than is found in fresh bark from Southern France.

The Alkaloids of *Anhalonium Lewinii*.—The various bases which have been isolated and well characterised, occurring in this cactaceous plant, are now obtainable commercially in a state of perfect purity. According to Merck they have the following characteristics:—Anhalonine hydrochloride, white crystalline needles; anhalonidine hydrochloride, white needles of the formula $C_{13}H_{15}NO_7 \cdot HCl$; lophophorine hydrochloride, white crystals of the formula $C_{15}H_{17}NO_5 \cdot HCl$; mescaline sulphate, colourless crystalline tablets, easily soluble in hot water, of the formula $(C_{11}H_{17}NO_3)_2 \cdot H_2SO_4 \cdot 2H_2O$; pellotine hydrochloride, white crystalline needles.

Nessler's Reagent.—This important test solution is, as is well known, prepared by dissolving mercuric chloride and potassium iodide in water separately, mixing them and rendering alkaline with caustic soda. In a recent issue of the *Pharm. Weekblad* Winckler states that a certain quantity of chloride of sodium or potassium is invariably formed, and that Nessler's reagent loses its activity on this account. He recommends that the solution should be prepared in the following manner:—Ten grammes of mercuric iodide is rubbed down to an impalpable powder, and 70 grammes of water and 5 grammes of potassium iodide added. Thirty grammes of caustic soda is dissolved in 30 grammes of water, and, when cooled, this solution is added to the mercuric iodide solution. It is claimed that this solution at once indicates with $\frac{1}{15}$ milligramme of ammonia in 150 c.c. of water, whilst the ordinary Nessler's reagent will not give any colour at once. [Our own experience is at variance with this result. We have prepared many batches of ordinary Nessler solution, and so long as it is properly made it will indicate far smaller quantities of ammonia than that given above. The whole secret of its preparation is to mix everything perfectly cold and be sure that sufficient mercuric chloride is added, after adding the alkali, to produce a permanent precipitate. Such a solution will keep for any length of time and is extremely sensitive.]

The Principles of Kouso-flowers.—A comprehensive paper on this subject by Kondakor and Schatz appeared in a recent number of the *Archiv der Pharmazie* dealing fully with the known facts of previous workers, together with their own results, on the chemistry of the active principles found in these flowers. The following briefly summarises the salient points of the paper. Coussine, or tennine ($C_{26}H_{44}O_8$), is a yellow amorphous body, soluble in alcohol and in alkalis but almost insoluble in water. Cosine is a crystalline body, originally put on the market in 1870 by Merck, and afterwards investigated by Flückiger and Buri. It is a pale yellow crystalline body melting at $148^\circ C.$, yielding isobutyric acid and an unidentified body when treated with dilute sulphuric acid. Flückiger assigned to it the formula $C_{21}H_{36}O_{10}$, while Leichseuring prefers $C_{22}H_{38}O_7$. According to Dacomo, cosine is a mixture of two bodies melting at $161^\circ C.$ and $105^\circ C.$ respectively. To the former was assigned the formula $C_{22}H_{38}O_7$. Cosotoxine is an amorphous body melting at 80° , of the formula $C_{23}H_{38}O_{11}$. So much was known or published of these bodies when Kondakor and Schatz took up the work. Although they have gone over much of the old ground they cannot be said to have advanced very much farther in the matter. They have prepared coussine and have not succeeded in crystallising it. It is possibly a glucoside, but no decomposition products have been investigated. Cosine was obtained in well-defined crystals, and the authors find it has the physical properties previously assigned to it. They find, however, that by dissolving it in alkali and precipitating with an acid, an amorphous powder, melting at $142^\circ C.$, results. This they consider an allotropic modification of cosine. Determinations by Raoult's method agree with either of the formulae $C_{22}H_{38}O_7$ or $C_{23}H_{38}O_7$. Cosotoxine, they state, melts at $76^\circ C.$, and may possess the formula $C_{23}H_{38}O_{10}$. It is believed that this last named body is really the active tennifuge.

Chaulmoogra and its Oil.

IN a note published in the current issue of the *Journal de Pharmacie et de Chimie* Despretz points out that Roxburgh, in his "Flora Indica," 1874, described *Chaulmoogra odorata*, and gave the characters of the seed as "cotyledons subreniform; radicle of variable direction." This plant, he states, is known as chaulmoogra or petarkura by the natives, and is employed in skin-diseases. Hanbury ("Science Papers") describes and illustrates chaulmoogra with lanceolate and foliaceous cotyledons. He recognised that the seeds are not absolutely identical with those of Roxburgh, but did not class them as a different species. In the usual works on materia medica, under the name *Chaulmoogra odorata* (Roxb.) and *Gynocardia odorata* (Brow.), seeds are described analogous to those of Hanbury, and not to those of Roxburgh. Some seeds recently received from Calcutta, coming originally from Sikkim, have been examined by Despretz, and he concludes that Roxburgh's seeds are larger and the colour of the testa less uniformly grey than those of Hanbury, being marked with black spots. The integuments are less brittle, and the colour of the seed itself is reddish, marked with large white spots. The cotyledons are thick and sub-reniform, and the radicle is placed on the side. There is a large quantity of hydrocyanic acid present, both in the cotyledons and in the albuminous matter. The *Chaulmoogra* found in most collections, improperly called *C. odorata*, is of an even grey colour. The integuments are very brittle, and the actual seed is of a blackish colour. The cotyledons are foliaceous and lanceolate, and the radicle is always situated at the end. The seeds contain no hydrocyanic acid. The conclusion arrived at by Despretz is that the seeds usually attributed to *C. odorata* belong in reality to a different species. He proposes to investigate the oils of these plants.

Whilst on this subject we may also draw attention to a paper by Dr. Unna (*Pharm. Central.*, xli., 74), in which he proposes for internal use a soap of chaulmoogra oil in place of the oil itself, as it is far better tolerated by the stomach. He suggests saponifying the oil and then making the soap into pills with an excipient of wax (1) and suct (5) with kieselguhr. The excipient is perfumed with coumarin dissolved in alcohol. The pills are prepared as follows:—

Chaulmoogra soap	...	...	...	300
Distilled water	...	...	...	200
Fatty excipient	...	...	...	200
Kieselguhr	...	...	...	100

Dissolve the soap in the water, add the remainder of the ingredients, mass, divide, and coat with keratin.

Ten of these pills may be taken daily. [It strikes us that a salol coating would be better than the unreliable keratin.]

Council Contest.

A Postcard Competition.

OUR annual contest in regard to the Pharmaceutical Council election begins to-day and will continue till April 30. Will our subscribers and their assistants, or members of their families, please write on postcards the surnames of the seven candidates who they think will be returned as members of the Council? The candidates are:—

Bateson, Thomas, Kendal
Camplin, A. S., Cambridge
Cooper, Albert, Kensington
Cross, W. G., Shrewsbury
Currie, W. L., Glasgow
Gibbons, Walter, Manchester
Gifford, R. L., Blackburn
Gostling, G. J., Stowmarket
Grose, Nicholas M., Swansea

Hills, Walter, London
Morrison, J. W. T., Tring
Pickering, C. E., London
Storror, David, Kirkcaldy
Symes, Charles, Liverpool
Taylor, John, Bolton
Warren, William, London
Wootton, A. C., London

We shall give a guinea to the person who sends in the correct seven in the correct order, and in the event of equality we reserve the right to add to the guinea or to divide it as the circumstances of the case suggest.

Awards in other competitions are in type awaiting an opportunity for insertion.

Legal Reports.

High Court Cases.

SACCHARIN PATENTS.

THE hearing of the case of the Saccharin Corporation (Limited) *v.* the Anglo-Continental Chemical-works (Limited), reported in THE CHEMIST AND DRUGGIST last week, was concluded last Friday afternoon, when Mr. Justice Buckley reserved judgment. It was an action against the defendant company and Mr. Robert Reitmeyer to restrain alleged infringement of Monet's patent for the production of toluol sulphonate in the manufacture of saccharin. The defendants denied infringement, and pleaded invalidity of the patent by anticipation.

In the course of the litigation the defendants admitted that the saccharin they imported into this country was manufactured at the Basle Chemical-works from toluene and chlor-sulphonic acid, but their case was that there was no infringement of Monet's patent, the quantities employed not being the same, the temperature not being the same, and time being in one process an important element and not in the other.

In opening the defendants' case, Mr. Neville said he would not trouble his Lordship until he had heard the evidence for the defence. Professor Ramsay and Professor P. F. Frankland were called in support. In cross-examination they admitted that there had been no previous publication which showed the public how sulpho-chlorides could be produced without the form of toluol sulphonic acid.

Mr. Otto Hehner, in evidence, showed that his experiments proved that Monet's production did, in fact, give results which could not be obtained by any variation of the conditions of the experiments, and that Monet's process gave better results than the variations he had tried in experiments.

Dr. Bischler, from the Basle Chemical-works, and Drs. Grandjean and Zimmermann were examined as to the process employed in the defendants' manufacture. They said that in their factories variations were made from Monet's specification in the conditions of temperature and mode of preparation.

At the close of the evidence Mr. Neville addressed the Court for about an hour, directing himself to a highly technical examination and comparison of the methods adopted at Basle chemical-works and under Monet's patent, his conclusions being that the quantities being different, temperature different, and time being an essential element in one process and not in the other, there was no infringement.

Mr. Wallace, Q.C., also argued that as Monet's patent was for the production of an intermediate product in the manufacture of saccharin, and they did not import the intermediate product, the article imported by defendants was not an infringement.

Mr. Justice Buckley intimated that he was against this contention.

Mr. Mark Romer, for the defendant, Mr. Robert Reitmeyer, argued that his client could not be held personally accountable for the alleged infringement, as he only acted as manager of the defendant company.

[In connection with our last report of this case, Messrs. Deacon, Gibson & Medcalf, solicitors, 9 Great St. Helens, E.C., write:—"With the accuracy of your report we have no fault to find, but we must ask you, in fairness to our client, to give the same publicity to the denial made by our counsel at the trial of certain statements made by Mr. Moulton, Q.C., in his opening of the case, as you have already given to those statements. The passage to which we refer, and which was due, of course, to Mr. Moulton being wrongly instructed, was as follows:—"The Chemical & Drugs Company, which fought a spirited action in a spirited manner, had, he believed, a paid-up capital of seven shares of 10*l.* each. The person there who was the active agent was Mr. Robert Reitmeyer. . . . No fund being available to pay the plaintiffs' damages, Mr. Reitmeyer went on as usual under the name of the Anglo-Continental Chemical-works (Limited). There is not a word of truth in the suggestion contained in this passage. Our client (Mr. Reitmeyer) had no connection with or interest in the Chemical & Drugs Company (Limited). The company was merely one of his customers. He took no part in the litigation, and could hardly, therefore, be called upon morally

or legally to pay the damages, if any, awarded to the plaintiffs in that action."]

BOOTS' BOYCOTTED BY PRINT-SELLERS.

IN the the Queen's Bench Divisional Court on April 4, before Justices Bigham and Phillimore, the case of Boots' Cash Chemists (Lancashire), Limited, came on in the form of a motion raising the question of whether the plaintiffs' statement of claim disclosed any cause of action. Mr. Rufus Isaacs, Q.C., said the defendants, Grindley, Palmer & Co., Liverpool, Mawson, Swan & Mawson, Newcastle-on-Tyne, Hibbert Brothers & Co, Sheffield, several Manchester firms, and Mr. J. W. Sampson, York, had got an order that the matter should come before their Lordships on the objection taken by them that the statement of claim disclosed no cause of action to go for trial. The point that was raised was that the plaintiffs alleged that, by reason of a circular sent out by the defendants, who are print-sellers, in combination with a number of others, they were prevented from carrying on their business. In other words, they said that the defendants had conspired to induce people not to enter into contract with them, and had thus prevented them from carrying on their business at a profit. The defendants issued the following circular, which was the foundation of the action:—

PRIVATE AND CONFIDENTIAL.

In view of the combination of several of the London publishers it is time that all *bona fide* print-sellers throughout the provinces became united to defend themselves. It is known that two or three firms have admitted that they supply Boots & Co., stores, drapers, and others (who are non-subscribers to the Print-sellers' Association) at half-price, and we think it very unfair, when they know that these people want them to sell to the public at 25 per cent. off the published price, and advertise the fact. If the provincial trade will all agree not to order any goods from travellers representing houses whose publications are systematically shown and offered by these notorious undersellers, then their reports of non success would show their principals how very seriously we take it; and although the measure proposed at the general meeting of the Print-sellers' Association will not go to the root of the evil, we feel sure it is bringing the aggressors into a smaller radius, and will to some extent mitigate the pernicious system of under-selling. This matter is becoming so serious throughout the provinces that we venture to bring this suggestion before your notice, in the hope that, by your assistance, it will have the desired effect.

In support of his contention that there was no cause of action, Mr. Isaacs quoted the case of Allen *v.* Flood as to the meaning of the word "conspiracy." He submitted that there was nothing unlawful alleged, and that an act committed by an individual which was a lawful act did not amount to a conspiracy when committed by a number of persons.

Mr. Justice Bigham: There might be a conspiracy to do what is right.

Mr. Isaacs said the word was generally applied to a combination to do something unlawful.

Mr. Walton, Q.C. (for the plaintiffs), said he was relying upon the fact of the combination of the defendants to induce publishers to refuse to sell to the defendants. He quoted the well-known case of the *Mogul s.s.* in support of his contention that there was a combination or conspiracy to prevent the plaintiffs carrying on their business so far as it related to the publications dealt in by the defendants. The defendants wished to sell the prints at high prices themselves, and they had combined to prevent the plaintiffs selling them at all, which, he submitted, was illegal.

After some considerable legal argument, their Lordships said they would take time to look into the cases cited by counsel on both sides.

THE VIMBOS PROMOTION.

THE action by a shareholder in Vimbos (Limited) to recover from the directors of the company damages for loss sustained owing to alleged misrepresentations in the prospectus still continues before the Lord Chief Justice and a special jury, and some interesting particulars leak out in regard to the promotion of the company. Mr. Mann, the manager of Messrs. Brown & Co. (Limited), advertising agents, stated in evidence that in 1896 the Scottish Fluid Beef Company was to be purchased, and Mr. Auld and Mr. Burn (the persons chiefly interested in it) told him that they would accept

40,000*l.* for it; but, when he had an interview with them and Mr. Duncan Smith and Mr. Rubinstein at the Hotel Victoria, Mr. Rubinstein was indignant, and declared that 100,000*l.* was the lowest price that could be accepted. Mr. Duncan Smith, solicitor, Edinburgh, detailed in the witness-box the negotiations which took place with Mr. Lawson Johnston, Mr. Hooley, and others; and it was after Mr. Johnston refused to pay 125,000*l.* for Vimbos that Vimbos (Limited) was promoted. Mr. Canney, who was for some time manager of Vimbos (Limited), told his Lordship and jury that there is a gross profit of 100 per cent. on the manufacture of Vimbos. Mr. Canney is now employed by Bovril (Limited), and he stated that Vimbos is still sold. The Lord Chief Justice asked what is the difference between Vimbos and Bovril, to which witness replied that Vimbos is in a measure a copy of Bovril. In re-examination he stated that Bovril (Limited) bought the goodwill of Vimbos (Limited) for 20,000*l.* (last week 27,500*l.* was the figure), and they thought it worth while to sell Vimbos as a separate article.

CLARKE & Co. v. BEESON & Co.

In the Chancery Division on March 30, this matter (see *C. & D.*, March 31, page 557) again came before Mr. Justice Byrne. By consent the injunction was now dissolved, and the defendants undertook not to part with any money they had received or might receive as the plaintiffs' agents. The motion stood over until April 6.

Pharmacy Acts (Ireland).

In the Belfast Summons Court on March 29, before Messrs. Garrett Nagle, R.M., and Arthur Holmes, J.P., the Pharmaceutical Society of Ireland prosecuted James Hogg, jun., 173 York Street, for that he, being a person not properly qualified by law, did, on March 14, sell to defendant, Francis Petty, a medical prescription. Mr. Donnelly appeared for the prosecution, and Mr. William Harper, solicitor, defended. After hearing the evidence the Magistrates imposed a fine of 5*l.*

Sale of Food and Drugs Acts.

VINEGAR.

At the Marlborough Street Police Court on March 30 the adjourned hearing of the case against Messrs. Hill, Evans & Co., vinegar-manufacturers, Worcester, for selling vinegar with a false warranty, was taken. Particulars of the former hearing were given in our issue of March 31, page 558, the issue being whether or not the water used by defendants was such as ought to be used in the manufacture of vinegar. Mr. Otto Helmer and Mr. Alfred Chapman, F.I.C., corroborated the testimony of Dr. Bernard Dyer. The article in dispute was a perfectly pure malt vinegar, and the water with which it was made was suitable for the purpose. Mr. Chapman stated that the excellence of Burton ale was due to a similar water. Mr. Fenwick (the Magistrate) said the defendants were charged under section 20, subsection 6, of the Act of last year, which reads:—

Every person who, in respect of an article of food or drug sold by him as principal or agent, gives to the purchaser a false warranty in writing, shall be liable on summary conviction for the first offence to a fine not exceeding twenty pounds, for the second offence to a fine not exceeding fifty pounds, and for any subsequent offence to a fine not exceeding one hundred pounds, unless he proves to the satisfaction of the Court that when he gave the warranty he had reason to believe that the statements or descriptions contained therein were true.

It was admitted by the prosecution that the unusual amount of the so-called sulphuric acid was due to the presence of sulphate of lime in the water. He did not think it was suggested that the amount of acid in the vinegar would make the use of the latter injurious to health. The firm in question had been brewing similar vinegar for the last sixty or seventy years, and he was of opinion that it was pure vinegar, and when the defendants described the vinegar as "pure malt vinegar" they did so honestly. The summons was therefore dismissed, but without costs.

MILK OF SULPHUR.

At Tamworth Petty Sessions, on March 27, William Holmes, shopkeeper, Glascoate, was summoned for selling milk of

sulphur which on being analysed was found to be adulterated with 49 per cent. of sulphate of lime. For the defence it was pleaded that the penny packets containing the drug were sold in exactly the same state as received from Messrs. R. Judd & Co., Birmingham, whose name appeared on each box. The Chairman of the Bench suggested that Messrs. Judd & Co. should also be prosecuted, and the case was adjourned for that purpose. [Other reports say *flowers* of sulphur.]

NON-SERVING OF ANALYST'S CERTIFICATE.

At the Enfield Petty Sessions on April 2, Llewellyn Davies, chemist and druggist, 3 Bridge Terrace, Enfield Wash, was summoned under the new Food and Drugs Act for selling camphorated oil that was 21 per cent. deficient of camphor.

Mr. John Avery, solicitor for the defendant, took a preliminary objection on the ground that when the summons was served a copy of the analyst's certificate was not served with it. This was required by the new Act.

Arthur Bridge, Middlesex County Council inspector, called the warrant officer, who deposed that he served the summons personally on the defendant, but he had no memorandum as to whether he served a copy of the certificate with it. Mr. Bridge contended the onus of proof as to the service was on the defendant.

Mr. Avery, without in any way admitting that, said he would call the defendant.

Mr. Davies was accordingly sworn, and said he was served with the summons, but no copy of the certificate was served. He produced the summons, upon which he made a note at the time that there was no certificate of analysis annexed.

Mr. Bridge contended that if he could show he handed the summons to the police for service with the certificate annexed, that would take the burden of proof off his shoulders.

Mr. Morton Latham said the summons would be dismissed, but he refused to grant costs to the defendant.

Bankruptcies and Failures.

Re A. MORRISON, 136 Cowcaddens, Glasgow, Chemist and Druggist.

THE examination of this debtor will take place in the chambers of Sheriff Strachan, County Buildings, 70 Hutcheson Street, Glasgow, on April 9. Creditors will meet in the chambers of J. Wilson & Stirling, 154 St. Vincent Street, Glasgow, on April 19, at 12 o'clock.

Messrs. D. S. Broadfoot, writer, Robert McAdam and Wm. L. Hatrick, wholesale druggists, Glasgow, have been appointed commissioners, and Mr. G. D. Stirling, C.A., is the trustee.

Re JOHN RAYNHAM, Coggeshall, Essex, Patent-medicine Vendor.

THIS debtor made application for his discharge at Chelmsford Bankruptcy Court on April 2. The receiving-order was made in 1894 on the debtor's own petition. The liabilities amounted to 187*l.*, and the assets realised 69*l.* A first and final dividend of 4*s.* 4½*d.* in the pound has been paid on the unsecured debts. Prior to 1892 the bankrupt, while engaged as manager of a farm at Barking, prepared certain medicines for cattle and horses, and in August, 1892, he started business in Coggeshall, with a capital of 170*l.*, selling medicines and drugs. Eventually his Honour suspended the debtor's discharge for the minimum period of two years.

Gazette.

The Bankruptcy Acts, 1883 and 1890.

ADJUDICATIONS.

Bottomley, Thomas, Liversedge, chemical-manufacturer.

Wilkinson, Robert William, Callington, Yorkshire grocer, greengrocer, and dealer in drugs.

ADJUDICATION ANNULLED.

Coe, Edward Thomas, Aldeburgh, Suffolk, veterinary surgeon.

New Companies & Company News.

SHAW, STURGES & CO. (LIMITED).—Capital 4,000*l.*, in 1*l.* shares. Objects: To carry on the business (*inter alia*) of chemists.

MACHIN'S MARKET (LIMITED).—Capital 5,000*l.*, in 1*l.* shares. Objects: To acquire the business carried on at Leyton as "Machin's Market," and to carry on (*inter alia*) the business of chemists. The first directors are A. C. Machin and W. E. Wass. Registered office, 1 Bank Buildings, Leyton, Essex.

DOUGHTY, SON & RICHARDSON (LIMITED).—Capital 60,000*l.*, in 10*l.* shares. Objects: To acquire the business carried on at Lincoln as "Doughty, Son & Richardson," and to carry on the business of seed-crushers, oil-refiners and merchants, sulphuric acid and chemical-manure makers, manufacturing chemists, &c. The first directors are W. W. Richardson (governing director), W. S. Richardson, and H. Newsom. Qualification, 500*l.* Remuneration, as fixed by the company.

BLACKPOOL HOMEOPATHIC SYNDICATE (LIMITED).—Capital 500*l.*, in 1*l.* shares. Objects: To carry on the business of homeopathic and general chemists, druggists, pharmacists, analysts, herbalists, and manufacturers of, and dealers in, proprietary articles, patent medicines and foods, mineral waters, soaps, cleansing and other preparations, &c. The first subscribers (each with one share) are:—J. Unitt, 28 Carshalton Road, Blackpool, tailor; R. D. Charlton, Lansdowne House, St. James Road, Blackpool, gentleman; J. Pearce, 81 South Street, Rochdale, town missionary; W. G. Perks, 15 Carshalton Road, Blackpool, traveller; J. T. Dash, 21 Alfred Road, Harpurhey, Manchester, assistant-superintendent insurance company; J. Dash, 21 Alfred Street, Harpurhey, Manchester, assistant-superintendent assurance company; and E. Frazackerley, 222 Lytham Road, Blackpool, draper. Registered without articles of association.

KHOOSH (LIMITED).—Capital 5,000*l.*, in 1*l.* shares. Objects: To acquire the business of the "Khoosh Tonic bitters Company (Limited)" (incorporated in 1882), to manufacture and deal in Khoosh tonic-bitters, and to carry on the business of chemists, druggists, drysalters, wine, spirit and mineral-water merchants, surgical and scientific instrument makers, &c. The subscribers are:—A. W. Johnson, Kenilworth, Bourne End, Bucks, gentleman; H. Davis, 116 and 117 Holborn, E.C., manufacturer; T. R. Haslam, 4 Copthall Chambers, E.C., solicitor; C. A. King, 3 Bushberry Road, South Hackney, N.E., accountant; A. H. Shaw, 137 Algernon Road, Lewisham, S.E., clerk; J. Fitzpatrick, 147 Leadenhall Street, E.C., chartered accountant; and F. W. Sullivan, 17 Telegraph Street, E.C., journalist. The number of directors is not to be fewer than three nor more than seven. The first are to be appointed by the subscribers. Qualification, 100 shares. Remuneration, 100*l.* per annum and a share in the profits, divisible.

BARCLAY & SONS (LIMITED).—At the meeting of shareholders on April 5, Mr. H. Davenport presiding, the report and balance-sheet of the directors were adopted and reference was made to the bonus scheme which the staff now enjoy. Mr. R. H. Groves was re-elected a director and Mr. Harry Barker re-appointed auditor.

L. ROSE & CO. (LIMITED).—The directors have declared a balance dividend of 7½ per cent. on the ordinary shares, making 12½ per cent. on the ordinary shares for 1899.

JOHN O'KEY & SONS (LIMITED).—The directors have declared the dividend on the 6-per-cent. preference shares for the six months ending April 30 payable on May 1.

A. & F. PEARS (LIMITED).—The interim dividend for the six months ended December 31, 1899, on the preference shares at the rate of 6 per cent. per annum, and also on the ordinary shares at the rate of 8 per cent. per annum, both less income-tax, will be paid on and after April 2 by Messrs. Glyn, Mills, Currie & Co., 67 Lombard Street, E.C.

TRITICINE (LIMITED).—The public examination of the directors of this company was resumed at Wakefield County Court last week. Mr. J. Hicks was recalled and cross-examined as to his connection with the company, but no evidence beyond that given in our issue of March 24, page 519, transpired. Mr. J. H. Goodall, the managing director and leading spirit in the concern, was then examined. He said Triticine was manufactured under his patent, and was made wholly from wheat. It included the germ of the wheat, as in Hovis flour. They expended about 8,000*l.* in advertising Triticine before the company was formed, and that caused a great increase in the sales. Before the prospectus was issued

over 30,000*l.* worth of shares had been applied for, including 20,000*l.* worth which Sir George Newnes agreed to take on condition that he had the advertising, which would cost over 8,000*l.* The latter were never taken up, as Sir G. Newnes denied the agreement. As soon as the company dropped advertising the sales fell off. The books of the firm of Messrs. Goodall & Sons were destroyed, because they were in the way. The proceedings were adjourned for four weeks.

SOUTHALL BROTHERS & BARCLAY (LIMITED).—Mr. Thomas Barclay presided at the annual meeting of the shareholders of this company at the Grand Hotel, Birmingham, on March 30. In moving the adoption of the report (published in the *C. & D.* of March 31), Mr. Barclay mentioned that the business had been one of steady growth. The profits and sales of the year were the largest on record, so, although the business is in its eightieth year, it showed no signs of senility. The Saltley works, begun in 1898, were rapidly approaching completion. There they would bleach cotton and weave various fabrics, and thus save the manufacturers' profit in the preparation of absorbent wool and surgical dressings in all their variety. The old partners in the firm had advanced 10,000*l.* towards the building and equipment of the new works, and during the year several thousands of pounds more would have to be found for their completion. The directors had increased the amount carried forward from 359*l.* 1*s.* 6*d.* in 1898 to 1,577*l.* 17*s.* 6*d.*, which they took from the year's profits, so as to have a good sum in hand towards the preliminary expenses of opening the new works, which they hoped to do during the current year. Mr. Barclay then referred to the cod-liver-oil prospects in Norway. The adoption of the report was seconded by Mr. A. Southall, and carried *un. con.* Mr. Wilfred Francis Southall was re-elected a director.

Advertising 3dcas.

THE "ABSENT-MINDED SPRING-CLEANER."

Cash prizes to the value of 3*l.* are offered by Boots (Limited) for the best three verses on spring-cleaning written as a parody on "The Absent-minded Beggar." The composer has to introduce into the poem the names of the firm's spring-cleaning specialities.

PHOTOTYPES IN LISTS.

Mr. J. H. Williams, pharmaceutical chemist, Bournemouth, has introduced into a recent issue of an illustrated handbook of his specialities a series of phototype plates of the labels of these preparations with prices attached. Six or eight of these fully-descriptive labels appear on each page, measuring only 6 inches by 4½ inches. The same idea is also applied to illustrating invalids' requisites, inhalers, glass-ware and the like, about twenty of these items and their descriptions appearing in the space that would be occupied by two or three "blocks" of the same articles. Other pages bear good photographic views of Bournemouth.

ADVICE OFFERED.

Lee's Advertising Agency (Limited), 26 Ludgate Hill, E.C., gives advice to those who would or should advertise, but do not quite know how to begin. In "Money-making Advertising," a booklet which they publish, they say:—

Many a sound business has been formed, and a fortune made, by a business-man—say, for example, a chemist—having been struck by the idea that it might pay to advertise some particular article from his stock.

Many a chemist has thought over this idea, and consulted a reliable and pushing advertising agency: the result has been that the article has been advertised—often in a small way for a start—and has finally produced a fortune or a large income for its originator. Now the scope for this kind of success is by no means exhausted. At the present time there are many chemists, grocers, wine and spirit merchants, tobacco merchants, confectioners, and proprietors of other kinds of stores or shops who have on their shelves articles that only need judicious advertisement to largely increase their proprietors' business and maybe provide them with fortunes.

For advice as to how it is to be done our subscribers should consult the booklet, of which a copy will be sent to any of them on application at the above address.

Westminster Wisdom.

SCOTCH LOCAL GOVERNMENT.

The member for Camlachie on Tuesday evening introduced a Bill to amend the Local Government Act, 1834. We hope he has not slipped an amendment of the Pharmacy Act into it.

THE COMPANIES BILL

will not now come on until after Easter. Mr. Balfour made a statement in the House on Monday regarding the business of the House, and this Bill was not included amongst those which he said should be advanced a stage before the House adjourns for the holidays on Monday evening, April 9. Although, therefore, Mr. Ritchie deferred the second reading until Thursday, April 5, it is not likely to be taken then.

PREVENTION OF CORRUPTION BILL.

On Monday evening this Bill, introduced by Lord Russell of Kilowen, was read a second time in the House of Lords. The discussion was brief, only Lord Russell, the Lord Chancellor, and Lord James of Hereford joining in it. All agreed that the ramifications of the secret commission method in trade appeared to be infinite, and that the difficulties surrounding the matter were great and numerous. The building trade was instanced as the worst. Lord Russell hoped that the Bill would be well considered by the Committee, and that it would be sent to the House of Commons with the view of being referred to a Select Committee.

PICRIC-ACID MANUFACTURE.

In the House of Commons on Tuesday, Sir Charles Dilke asked the First Lord of the Admiralty whether the attention of the Admiralty and War Office had been directed to the desirability of establishing the manufacture of picric acid within the United Kingdom; and Mr. Powell Williams, who answered the question, said the desirability of encouraging the production of picric acid of British make had been kept constantly in view ever since it was adopted as a warlike store. With the exception of a small quantity recently ordered to meet present urgent demands, all the supplies obtained for both land and sea service had been manufactured throughout in this country.

ARMY VETERINARY MEDICINES.

A question put by Mr. Faber, member for York, to the Under-Secretary of State for War on Tuesday, inferred that the medicine-supplies on board the *Goth* when it took 240 horses out to the Cape were not quite up to the mark; but Mr. Wyndham denied the suggestion, maintaining that the vessel was amply provided with medicines and appliances by the Army Veterinary Department. In this connection we may note that there is very general dissatisfaction with the way in which army horses have been looked after in South Africa owing to the inadequate number of veterinary surgeons attached to the force. Civilian V.S.'s have lately been going out; but it appears that the inducements offered do not bring forward as many as are required.

THE POST OFFICE.

The Duke of Norfolk before going out with the Yeomanry to South Africa resigned his position in the Government as Postmaster-General, and the Marquis of Londonderry has been appointed to succeed him.

Chemists who are sub-postmasters will be interested to learn that the Metropolitan Grocers' Association has been endeavouring on behalf of those of its members who are sub-postmasters to get restitution of the commission on crossed postal orders presented by bankers and paid through sub-offices. Sir George Murray, Secretary of the Post Office, did not give a very satisfactory reply, and the Secretary of the Association thereupon wrote to him stating that during the last few years the cost of the up-keep of sub-post offices has steadily increased largely in connection with the additional work which sub-postmasters are called upon to undertake without any extra remuneration. They have undertaken their duties with this payment of commission on all postal orders received from banks as a part of the remuneration which they are promised by the regulations published in 1891 to 1897.

THE FINANCE BILL.

On March 30, when the House of Commons went into Committee on the Finance Bill, the Chancellor of the Exchequer moved a clause imposing an Excise penalty of 50% and forfeiture of the goods on any manufacturer, retailer, or dealer having in his custody or possession a y tobacco fit for sale or tender for drawback containing a greater proportion of oil than 3 per cent. Sir John Wilkes (M.P. for Everton, Liverpool) asked the Chancellor to defer the clause on the ground that without notice it would impose a new penalty on manufacturers. The Chancellor replied that he had thought the clause would be a great advantage to the trade, but deferring to his hon. friend's acquaintance with the subject he would not press the proposal, and the motion was withdrawn.

Apart from the above proposal, the debate on the Finance Bill has yielded little that is of interest to the drug-trade, except that on March 29 the following clause was added to it:—

The duty to be paid on goods or commodities deposited in a Customs or Excise warehouse is hereby declared to be the duty chargeable at the date of the actual removal of those goods or commodities from the warehouse, and if before that date any sums shall have been paid in respect of duty, the difference (if any) between the sums so paid and the actual duty chargeable shall be paid or repaid, as the case may be.

PARIS EXHIBITION AND SUNDAY OBSERVANCE.

Sir M. Stewart, on March 31, asked the Under-Secretary for Foreign Affairs in the House of Commons if his attention had been called to the rule by which British exhibitors had been required to display their goods at the forthcoming Paris Exhibition on Sundays, whether they had refused to exhibit on the Lord's Day in former exhibitions, and whether the President of the U.S. had directed the U.S. Commissioner to prevent as far as possible the exhibition of goods from America on Sundays, and whether the Government would use their efforts in a like direction. Mr. Brodbeck said the question was one for the Royal Commission, and the attention of the Secretary had been drawn to the matter.

Lord Kinnaird put a question to the Marquis of Salisbury on the same subject in the House of Lords on Tuesday afternoon, suggesting that her Majesty's Government should co-operate with the U.S. Government. The Prime Minister replied that the matter was entirely in the hands of the authorities of Paris, and he did not think the opinions generally prevalent in France are precisely in accord with those of Lord Kinnaird.

CUSTOMS DUTIES ON ETHERS.

In the House of Commons on Monday evening Sir Charles Cameron put the following question to the Chancellor of the Exchequer:—

What was the total amount of Customs duties paid according to the last Annual Report of the Commissioners of Customs on the following nine articles—chloral hydrate, chloroform, collodion, acetic, butyric, and sulphuric ethers, iodide, bromide, and chloride of ethyl;

At what amount does he estimate the increased Customs duties proposed under the Finance Bill of this Session to be levied on these nine articles;

And, whether, in view of the fact that the revenue to be realised is so small, that the proportions by which the duties hitherto levied on these articles is proposed to be increased vary from 5 to 28 per cent, and that no corresponding increase of duty is proposed in the cases of transparent soap and confectionery in the manufacture of which spirit is used, he will reconsider the question of disturbing existing duties on the nine articles specified?

To this Sir Michael Hicks Beach replied: The Customs duties paid on the articles mentioned amounted in 1893-94 to 2,349%, and the increase in the duties is estimated to produce about 150%. In the manufacture of these articles spirit—on which increased duty has to be paid—is used, and I do not think it would be fair to the British manufacturer, who has to pay these increased duties, to admit the like articles of foreign manufacture without any proportionate increase of duty. No increase has been proposed in the duties on confectionery made with spirit, or on transparent soap, as the proportionate increase would be too small to be expressed in any current coin.

Deaths.

BROWN.—On March 21, at Sutton Without, Mr. Thomas Brown, chemist and druggist. Aged 43.

FERRIDAY.—On March 21, Mr. Edwin Joseph Pitchford Ferriday, chemist and druggist, Birmingham. Aged 45.

GLASIER.—At Orchard House, Lincoln, on March 21, Mr. George Glasier, chemical-manufacturer. Aged 92. The late Mr. Glasier was born at South Hykeham, and was the son of a farmer. He first started business in Lincoln as a draper, but shortly afterwards entered into partnership with Messrs. John Jekyll & Son, chemical-manufacturers. Afterwards the late Mr. Charles Pratt joined in the business, which was carried on under the style of Jekyll, Glasier & Pratt until three years since. Mr. Glasier had a record of public service extending over half a century. In 1863 he was made a Justice of the Peace for the city, and a year later he was returned for the Middle ward as a member of the City Council, his connection with which ceased only at his death, he having been an alderman since 1877. In 1868 he held the office of mayor. Alderman Glasier was the last of the original shareholders of the Lincoln Corn-exchange and Market Company, formed in 1847, and he had been chairman of that company for upwards of forty years.

HART.—At Manchester, on March 29, Mr. Thos. Hart, pharmaceutical chemist. Aged 48.

HARRISON.—On March 31, at 2 Southburn Villas, Hessele, Mary Odgers, the dearly-beloved wife of Mr. Geo. Wm. Harrison, representative of Messrs. Lofthouse & Saltmer.

HENDRY.—Mr. Alexander John Garden Hendry, F.C.S., pharmaceutical chemist, who for a number of years had charge of Messrs. Lorimer & Co.'s laboratory at Britannia Row, Islington, N., died last week. Aged 35. Mr. Hendry served his apprenticeship in Turriff, N.B., and afterwards went to Edinburgh, where he became a strong supporter of the local Chemists', Assistants', and Apprentices' Association, doing good work in connection with it, some of the work being singled out by Dr. John Atfield for incorporation in the British Pharmacopoeia. He passed the Minor examination in 1890 and the Major in the following year, being one of Mr. William Duncan's most brilliant pupils. He came to London seven years ago to take up a position with Messrs. Lorimer & Co., and was highly esteemed by them. His early death from pneumonia is much deplored by a wide circle of friends in London as well as in Scotland.

HURST.—On April 4, at Market Place, Louth, Lines, Mr. John Hurst, pharmaceutical chemist. Aged 83. The deceased gentleman was a magistrate for the borough, treasurer for many years of the Louth National Schools, and till recently was the auditor of the Louth Savings Bank.

PEARMAN.—The death occurred on March 26 of Mr. Thomas Hame Pearman, analytical chemist, who was well known as the co-author with Mr. C. G. Moor, M.A., of works on the analysis of food, drugs, and water, and on bacteriology. Mr. Pearman was under 30 years of age. He was a pupil-assistant with Mr. A. H. Allen, but during the past eight years he had been principal assistant in the laboratory of the Apothecaries' Hall, Blackfriars. He has succumbed to rapid consumption, and we regret to learn that his wife and child are left indifferently provided for, as since his marriage five years ago, when he insured his life for a small sum, many calls upon his purse prevented him saving. Mr. William Chattaway and Mr. C. G. Moor have issued an appeal to his old friends, and cheques may be sent to the former at the Apothecaries' Hall.

PEPPER.—The death last week is reported of Professor Pepper, whose connection with the historical illusion known as "Pepper's Ghost" brought for its inventor an almost world-wide reputation. The late professor was born at Westminster on June 17, 1821. He was educated at Loughborough House, Brixton, and King's College School, Strand. In 1840 he was assistant chemical lecturer at the Granger School of Medicine. It was in 1847 he gave his first lectures at the Royal Polytechnic Institution, and in 1849 he was appointed analytical chemist and lecturer on chemistry at the Royal Polytechnic. He afterwards became

honorary director of that institution. He was an honorary life member of the Institution of Civil Engineers and a Fellow of the Chemical Society. While in Australia he was appointed public analyst to the Mayor and Corporation of Brisbane, Queensland, holding the appointment for many years.

ST. GEORGE MIVART.—Dr. St. George Mivart, F.R.S., the eminent naturalist, died at his residence 77 Inverness Terrace, Hyde Park, W., on March 31. Aged 71. Dr. Mivart was the well-known antagonist to the Darwinian theory, and was recently excommunicated from the Roman Church. From 1874 to 1880 he was secretary to the Linnæan Society, afterwards becoming vice-president. In 1874 he became Professor of Biology at University College, and in 1876 he was created a Ph.D. Rome. Subsequently he became an M.D. of the University of Louvain, where he accepted the post of Professor of the Philosophy of Natural History.

SUTHERLAND.—At Portsoy, Banffshire, on March 30, Mr. John Sutherland, chemist and druggist. Aged 52. Mr. Sutherland was attending to his usual duties in the shop when he fell down unconscious and died before the arrival of a medical man. He was well known and much respected in the district, having carried on business in Portsoy for about thirty years. He was a native of the town, and after serving his apprenticeship with the late Mr. Findlay, chemist, he was for some time in Greenock before starting in business on his own account.

TILSON.—On March 30, suddenly, at Long Sutton, Mr. James Tilson, chemist and druggist. For many years he carried on business at Tydd St. Mary, but on the death of Mr. J. N. Sutterby he acquired his business at Long Sutton, which he conducted until a year ago, when he retired, and Mr. Driver became his successor. Mr. Tilson was chairman of the Long Sutton Gas Company and a director of the Market House Company. He was a large property-owner, and a well-known Swedenborgian.

WARD.—At Retford, on March 29, Mr. Richard Smith Ward, chemist and druggist. Aged 60. The late Mr. Ward, who was one of the oldest tradesmen in Retford, died suddenly in the house attached to his business-premises in Carol Gate.

Some Good Recipes.

A Good Furniture-polish.

Boiled linseed oil	...	...	...	14 parts
Acetic acid	...	...	...	6 parts
Antim. mur.	...	...	...	2 parts
Turpentine	...	...	...	10 parts

M.S.A.

Eczema-salve.

Acid. boric.	...	...	...	5ij.
Bals. Peruv.	...	...	...	9j.
Vaselin.	...	...	...	3ij.
Ess. bergam.	...	...	...	q.s.

M. Ft. ung. Bis die utend.

Tic-powder.

Quin. valerian.	...	...	...	gr. iij.
Pulv. ipecac. co.	...	...	...	gr. iij.
Ferri carb. sacch.	...	...	...	gr. vj.

M. Ft. pulv.

This is a favourite powder. I have dispensed the prescription scores of times. Friends hand it round to each other.

Toothache-drops.

Chloroform.	...	...	...	5ij.
Lin. aconit.	...	...	...	3ij.
Tr. capsici	...	...	...	3ss.
Ol. caryoph.	...	...	...	5ss.
Camphor.	...	...	...	5ss.

M.

This was given to me by a dentist, and I find it excellent.
Vix. (248/44.)

Correspondence

TO CORRESPONDENTS.—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects of general interest.

The Camphor-monopoly.

SIR,—Our attention has been called to your article headed "Formosan Camphor-monopoly" in your issue of March 31, and in view of the misstatement in it—viz., that our firm have paid 250,000*l.* for the concession—we must ask you to insert this letter in your next issue.

It is absolutely untrue that our firm have made any payment to the Japanese Government for the so-called concession. We have undertaken the sale on behalf and for account of the Japanese Government.

It would be as well to recite the causes which have led to the steps which have been taken to preserve the camphor-trade from extinction.

The Japanese Government found that immature trees were being ruthlessly cut down, and had they not intervened it is quite likely that in the course of a very few years the production of camphor would have ceased. They have, therefore, taken the matter into their own hands, not with the intention of putting prices to famine rates, but of so organising the business that it may continue in perpetuity, instead of, sooner or later, ceasing to exist.

Under these circumstances it has been necessary to curtail exports, and the Government have accordingly declared that during the next three years they will confine exports from Formosa to 30,000 piculs a year, with a maximum export of 50,000 piculs. As the consumption of the world is about 65,000 piculs, it is clear that great care will have to be used in marketing the article in order that legitimate trade-interests shall not suffer, and this is the basis upon which we propose to work.

We must take exception to your statement that the Japanese Government propose competing with refiners here. This is not so; but in order to minimise the great loss which occurs through excessive moisture in crude camphor it is proposed to continue the shipments of partially-refined camphor in bells, as has been the case since the Government took over practically the packing of the camphor for export themselves.

The misapprehension as to any amount having been paid to secure the contract probably arose from the fact that the Government required a deposit of 200,000*l.* to secure to them due payment for shipments of camphor which they are sending forward for sale.

Yours truly,

16 Leadenhall Street, E.C., M. SAMUEL & Co.
March 30.

[We gladly insert this correction. We ought to have said that it was rumoured that 250,000*l.* had been paid for the concession, and it now transpires that a sum of 200,000*l.* has been advanced. The penultimate paragraph in the letter does not controvert our statement that the Japanese Government are competing with refiners here, for by putting on the market a camphor in bells (although called "partially refined") they not only compete but take away from English and German refiners a certain amount of the business which they have hitherto had. Messrs. M. Samuel & Co. are apparently unaware that we have long advocated the need for checking the great waste of camphor-trees in Formosa, and the new regulations, as a means to that end, we gladly welcome.—EDITOR.]

Powell's Balsam.

SIR,—I have read with astonishment the letter of Mr. McWalter concerning the change in Powell's balsam. Not only is the notice concerning it containing poison omitted, but the circular wrapped round it states that it is sold by "respectable" chemists and patent-medicine vendors. Sometimes customers have asked me which I should recommend, Powell's balsam or Owbridge's tonic, and of the two I have invariably recommended Powell's, simply for the reason that

it is a chemist's article only. This step on the part of Messrs. Powell will probably be the cause of a mild revolution amongst chemists on account of the way they have gone about it. Doubtless the fact that the article bears a fair profit has been the cause of its latter-day success, and I consider that now is the time for Messrs. Owbridge to place their lung-tonic on the strength of the P.A.T.A., charge another 6*d.* per dozen wholesale (without giving a moment's notice of their intention, thereby preventing cutting firms preparing for it) to recompense themselves for the extra trouble, and raise the minimum selling-price to 1*s.*, or make 1*s.* face value. Now is the time for them to do it while the iron is hot. I have written to Messrs. Owbridge asking them to allow the Secretary of the P.A.T.A. to assist them in assuring a fair profit on their preparation, and I hope other chemists who care for a profit will do the same. I can foresee a brilliant winter for them, next winter, if they do so now, so as to get the public accustomed to the change in price by then, as my experience shows that it is almost, if not quite, as popular as Powell's balsam.

Perhaps Messrs. Powell will have something to say in reply in your next issue, and I await with interest to see it.

Yours truly,

2 Fernhead Road, W., WM. GEO. FURSE,
March 29.

Why Mr. Reid is not a Candidate.

SIR,—Allow me to thank, most sincerely, the gentlemen who honoured me by nominating me for the coming Council election, and also the many friends who have written to me privately on this matter. Had I stood the election, I have every reason to believe that the same generosity on the part of my friends which placed me on the list of nominees, would also have given me a good position at the poll. I have, however, resolved, after the most earnest consideration, not to stand an election just now. I think I ought to give my reasons for coming to this decision. In the first place I do not think that anything can be done within the Council towards the redemption of pharmacy for a considerable time yet. It is pretty plain that, as the Council has resolved to oppose "Clause 2" without bringing forward an amendment, this clause will be dropped, much to the satisfaction of an embarrassed Government. This takes the whole question out of the Parliamentary arena once more, and there is no hope of its re-introduction in the near future. In my opinion the work which has now to be done lies outside the Council chamber. It will consist in a vigorous educating propaganda amongst ourselves, journalists, and the people generally. It is plain that the House of Commons now sees the great injustice of our position, but cannot find a way of dealing with the question without touching those sacred Army and Navy Stores. I foresaw this, and called attention to it long ago. The Army and Navy Stores are undoubtedly the stumbling-block in the way of the Government, and rather than touch them a certain number of men will support an injustice which would bring disgrace on a semi-civilised or savage State.

My second reason for not coming forward just now is that the Council is not leading the world of pharmacy, and has not been leading it, at all events from the beginning of the present active struggle for freedom, however much further back its lost control may date. As a result it does not at present hold the sympathy, or even the respect, of the rank and file throughout the country. I have no doubt that all this will be changed in time, and, as a constitutionalist, I wish for nothing better than to see the Council taking its proper place at the head of pharmacy. There is great hope in the progressive party headed by Mr. Glyn-Jones, who has my entire sympathy in his Council work. At some future time, if I think I can be of service to pharmacy by sitting on the Council, I shall come forward and place myself in the hands of my friends, but if I continue to think that I can serve better outside the Council I shall not come forward at all, as I have never sought after personal advantage or honours in this matter, and never shall.

JAMES REID

Dumfries, April 2.

The Council Election.

SIR,—If the President of the Society used the following words, "My study and the hobby of my life has been

pharmacy rather than pharmaceutical politics," it appears to me that the time has come when presidents and councillors both shall throw their energies and time more into the political arena. There is a Council election on, and the electors will do well to select men who will spend time and thought on getting matters pharmaceutical set right with Parliament. It may be waste of time to hark back on what might have been, but there is crying need for the drafting of an amended Pharmacy Act in accordance with present-day views.

April 3.

AN ELECTOR. (34/19.)

The Companies Bill.

SIR,—I am of Mr. Boot's opinion that the same sance should be served with the goose and with the gander, and that it is unfair to compel a company to publish the names of its branch-managers unless the same rule be made to apply to all branch-shops, whether owned by companies or by individuals. I can see no great hardship in making the condition of Clause 2 apply to all branch-shops, and certainly it would be to the advantage of the public, and also to the managers themselves, whose names and titles would receive an increased value. So far I am on Mr. Boot's side. As a matter of fact, we know that it is the rule of every large company to employ qualified men as managers; and we know, too, that the same rule is not invariably adhered to by private owners of more than one shop. I have managed a branch-shop for a private chemist before I was qualified, and I am now the qualified manager of a company's branch, so I know what I am saying. I am, therefore, of opinion that Clause 2 as it stands is unjust, unless the same rule be made to apply to individual chemists as well as companies. But if Mr. Boot can see the injustice of one-sided compulsion, how is it he cannot see the grosser injustice of one-sided licence? I refer, of course, to the assumption by unqualified men of the qualified man's title. The point has been argued so often that one is weary of its repetition, and yet it needs repeating and reiterating if the chemist's title is to retain a fraction of its value. Company-trading has come to stay, and no amount of petitioning will ever induce Parliament to frame a clause which would result in its destruction. Vested interests and justice forbid. But—and here I oppose Mr. Boot and all his party—we qualified men have a vested interest in our title of chemist—a title which many of us spent years of work and self-denial to win, and which is to the majority of us almost our only capital. By what right or under what sophistry does Mr. Boot or any of his unqualified *confères* claim to use our title? They can trade as drug-companies if they like, but when they call themselves chemists they rob us of our hard-earned right to the sole use of the name, and they deceive the public by posing as chemists when they are really only employers of chemists. I ask Mr. Boot to say plainly why he should be allowed to use my title simply because he employs me? Has anyone yet explained why seven unqualified men should be allowed to do what one or six men may not do? I know this question applies to the "keeping open shop" as well as to the use of titles; but it is no use crying for the moon, and no sane man thinks that we can ever again close the doors of all the drug-departments and branch-shops owned by the companies. But we can, if united, compel these companies to abandon the use of a title to which they have no possible claim or right. That is where we should take our stand, both in our letters to our M.P.'s and in choosing whom we shall elect to the Pharmaceutical Council.

But if we got our rights on this point, what then? How many "chemists" would still ignore their own real title and elect to trade as "drug-stores"? And how many of the physic-buying public would care a single iota for the chemist's title or the manager's posted name so long as they get their drugs a halfpenny cheaper here or there?

Nevertheless it is our right, and Englishmen are fond of having their rights, even if they be not worth very much. Fashoda may be "only an acre of sand and three palm-trees," but we don't mean letting anyone else have it without fighting for it. But where is the Kitchener of pharmacy? Where?

CHEMIST. (91/17.)

The True Shamrock.

SIR,—I have read a great deal of what has been written on this subject, and the opinion I have come to is that we

have not sufficient evidence to prove any particular plant to have been "the original and only genuine shamrock." "Shamrock" is, indeed, as Friend well says, rather a generic term than the name of one particular plant. But if I were asked what plant has, upon the whole, the best show of evidence in favour of its right to be considered the original shamrock, I should without hesitation say woodsorrel (*Oxalis Acetosella*, the *Trifolium acetosum* of our old herbalists). My reasons for this are set forth at large, if anyone cares to see them, in a discussion with Mr. W. A. Henderson, of Dublin, on "The Shamrock as Food," in *Notes and Queries* (8th S., xi. 505; xii. 37, 397; and 12th S., i. 131). Mr. Henderson was not directly opposing my theory that woodsorrel is the original shamrock, but was contending that the shamrock formerly, according to the testimony of unimpeachable witnesses, freely eaten as food by the wild Irish, was, according to Lobel, meadow trefoil (*Trifolium pratense*). This fact appears to have been first discovered by Mr. Nathaniel Colgan, M.R.S.A., and to have been the occasion of a series of articles by him originally published in the *Journal of the Royal Society of Antiquaries of Ireland*, and afterwards in a pamphlet on "The Shamrock as Food," of which he very kindly sent me a copy, and which is undoubtedly the most exhaustive treatise on the subject ever published. Now I am bound to confess that Mr. Colgan believes either *T. pratense* or *T. repens* to have been meant by Lobel, and to be, in fact, the true shamrock. It is also the fact that Gerard says that the Irish name for *T. pratense* is "shamrock." But neither Lobel nor Gerard says where he got his information on the subject, and there is, in my opinion, abundant evidence in Mr. Colgan's treatise that the plant the Irish ate was not a clover. All the direct evidence we have on this subject is this. Lobel says:—

Nec aliud ab isto [he is speaking of *Trifolium pratense*] est quo mortales meri Hybernie, delitias irritamentaque palati spreti, placentas, lagana et panes pinsunt exque butyro subigant quæ latrant obtrudent stomacho.

This apparently means that these shamrocks (whatever they were) were crammed into a paste with butter, and possibly some other ingredient. They can scarcely have been actually ground to a meal and made into bread, as the following passages will show. The first is from Campion, who wrote in Dublin in the year following the appearance of Lobel's *Adversaria*. He says of the ordinary food of the Irish:—

Shamrotes watercresses, and other herbes they feed upon; oatmeale and butter they cramme together.

The poet Edmund Spenser (another first-hand witness) says of the fugitive rebels of his time:—

They did eate of the dead carrions; . . . and yf they founde a platte of water-cresses or shamrokes there they flocked as to a feast for the time.

It is admitted that in these three passages we have all the real evidence there is as to what the Irish ate under the name of shamrocks. I ask, Does Lobel's evidence amount to any more than that of the other two, simply because he puts his statements under *Trifolium pratense* (he never uses the name "shamrock")? What evidence is there that the shamrock of Campion and Spenser was meadow clover? Later writers describe the shamrock as a sour herb, which clover is not. The association of shamrock with watercresses certainly points rather to woodsorrel than to clover, and we know from many sources that woodsorrel was a common ingredient in salads, and was often eaten alone as a salad in other countries besides Ireland (on the Continent it still is); but who ever heard of clover as a human food? If it had been used as such by the Irish, would there not have been more evidence of the fact?

In conclusion, it is quite a mistake to suppose that the connection of St. Patrick with the shamrock is of ancient date. The story of his using it as a proof of the doctrine of the Trinity is a comparatively modern one, and does not appear (says Prior) in any of the old legends of the saint. Mr. Colgan affirms that the shamrock was used as food in Ireland long before it became the national emblem, and both he and Mr. Henderson acknowledge that they find "some intellectual and physical difficulty" in swallowing Lobel's account of shamrock-bread. It is much easier to believe that Lobel bungled his account of some such report

as Champion's or Spenser's of the use of a fairly common article of food like woodsorrel than that he was right in saying that the Irish made bread and cakes of clover.

Yours, &c.,

C. C. B. (44/65.)

Qualified Assistants and Company-pharmacy.

SIR,—“A Rank Outsider” has struck the right note in regard to the salaries paid to qualified assistants by company-pharmacies. So long as it is not illegal, and does not jeopardise the diploma of an assistant, no force can be brought to bear upon them to prevent their going into such service. But this they ought at least to bear in mind—they are earning a salary paid to them by the recognised pirates in pharmacy, who without their assistance could never carry on this unjust competition. They should also remember what it costs them to qualify—not only in pounds sterling, but in the expenditure of enormous mental force. Further, they should also recollect that in a few months the increased fee for the qualifying examination will place a greatly enhanced value upon their services. How any capable man can spend his best energies for ten or more hours a day at the constant, responsible, and oftentimes harassing duties under extreme pressure at the dispensing-counter for a paltry 2*l.* a week, as I have seen them do, passes my comprehension. Surely, if he is not quite a fool, he must know that his services are as responsible, and to a certain degree more so, than that of the manager. No man ought ever to think of dispensing for such “pharmacies” at anything less than 3*l.* 10*s.* to 4*l.* a week. If he does it for less, he must consider himself not only an enemy to pharmacy proper, but also to his best commercial interests. If such men would but combine they could soon force the hands of these employers, who would then see the necessity, if not of charging for the water in the mixtures, of allowing some margin for professional skill.

Yours faithfully,

C. E. PICKERING.

97 High Street, Manchester Square, W., April 3.

Got it through the “C. & D.”

SIR,—Many thanks for your note *re* Pickwick perfume. My inquiry for this was inserted in your journal under “Information Wanted,” and in four days I got a bottle for my customer, who is delighted that I have been able to procure her the perfume so quickly. She has tried for a year or more to get the perfume. She wrote to Cheetham Hill, and her letter was returned. It shows the extreme usefulness of THE CHEMIST AND DRUGGIST to its subscribers, and is an indication of an extensive circulation. Again permit me to thank you for your kind attention.

Yours truly,

W. V. (245/63.)

Legal Queries.

Before sending in a query for reply in this section see if the subject is not dealt with in “The Chemists' and Druggists' Diary,” 1900, pages 212-226, and pages 259-262.

21/17. *Carui*.—We do not think there is any risk at all under the new Sale of Food and Drugs Act of selling Egg-powder so long as it is described as “a substitute for eggs.” There is the possibility that some hair-splitting authority may try to convince a magistrate that “egg-powder” means “powdered eggs,” but there can be plenty of evidence to the contrary, and the use of a term like “cake-powder” is not much better.

31/71. *R. W. B.*—If you have documentary evidence that you actually let your window to the firm, and agreed to do certain things for them for a consideration, and they have failed to do their part, you may raise a County Court action against them. You had better consult a local solicitor.

21/24. *W. C.*—A Bill reaches the Committee stage in Parliament as soon as it is read a second time. The division before that reading determines whether the House agrees with it generally in principle; if the members do not so agree the motion for the second reading is defeated and the

Bill drops. In the case of the Companies Bill, which is a Government measure, the second reading is practically a certainty, as the Government majority will carry it. It is then to go to a Grand Committee. Should this happen before Easter, the Committee will not commence its work until after the Easter recess.

35/7. *Dental Student*.—It is not at all likely that you will be registered now by the General Medical Council as a dental student, which is all they had power to do for you in 1880. You should have pressed your claim then.

47/3. *East Anglia*.—You will find the stamp-duties payable on the transfer of shares on page 261 of THE CHEMISTS' AND DRUGGISTS' DIARY. The Revenue does not take into cognisance whether the shares are given as a present or otherwise.

39 17. *Non Possumus*.—Syrup of red poppies is not a scheduled poison. We consider that spirit of chloroform is, as it contains chloroform, a scheduled poison.

39/54. *W. F. F.*—As calomel is not a scheduled poison anyone may sell it or teething-powders containing it.

38/40. *Counter-hand*.—In stamping patent medicines it does not matter what prices are marked—the duty is payable upon the price at which they are sold. If, for example, you put up a cough-mixture priced 1*l.* 1*s.*, but sell it at 1*s.*, a 1½*d.* stamp is all that is required. As to who stamps, that should be the person who first sells it in Great Britain, whether maker, wholesaler, or retailer, and the only exception to this is in the case of articles sold “for dispensing-purposes only.”

44/51. *Nab s.*—Mackenzie's arsenical soap is not a poison within the meaning of the Pharmacy Act, because no poison is detectable in it by analysis.

44/60. *Phroso*.—Ammonium carbonate may be used as a constituent of baking-powder. It has never been held to be an article injurious to health, as alum has been, under the Sale of Food and Drugs Acts.

44/66. *Duplico*.—The decisions under the Sale of Food and Drugs Acts in regard to the use of salicylic acid as a preservative in wines leave the balance of opinion in favour of the acid, and this would no doubt apply to its use in fruit syrups and cordials. There is some dubiety about it, but that no doubt will be removed by the Commission which is at the present time considering the whole matter.

45/6. *Administrator*.—The administrator of an estate is by law required to pay the debts of a deceased person provided the estate of the deceased is equal to it; but he is not called upon to put his hand into his own pockets for that purpose.

Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular date, nor can we repeat information given during the past twelve months.

76/18. *Syrupus*.—(1) “Veterinary Counter-practice” (Office of *C. & D.*, 3*s.* 6*d.*) contains numerous receipts, and deals with the first five questions you ask in a fuller manner than we have space for in this column. (2) The liquid starch-gloss (page 307, “Pharmaceutical Formulas”) separates on standing. (3) In the absence of an official formula or indication from the prescriber as to what to use, you are at liberty to dispense any good syrup for syr. hypophosph. (4) Spirit of tar is poisonous to insects, as a rule. (5) “Carbolic creosote” is that fraction of the distillation of coal-tar containing most of the phenol and creosote oils.

23 57. *Rugestris* (Barcelona).—To Detect Saccharin in Mineral Waters.—The saccharin is first extracted from the liquid by shaking with small successive portions of ether. The saccharin is then thrown out by acidifying the ether with dilute sulphuric or phosphoric acid, and separating. The saccharin is then demonstrated either

by the salicylic-acid or fluorescent test. In the case of the former about twice its weight of caustic soda is added, and the residue is heated at 250° F. for half an hour. On mixing the fused mass with water salicylic acid separates, and is tested for. As salicylic acid is sometimes present in a mineral water this test is not always available; recourse is then had to the fluorescent test. In this the saccharin is heated with a slight excess of resorcin and a few drops of sulphuric acid until it begins to swell up. Remove from the flame until the reaction slackens, then heat again. Dilute the residue with water, and add caustic potash, when a strongly fluorescent solution is obtained resembling fluorescein.

27/11. *M. N.*—The Rules for Assistants, as used in the Army and Navy Stores, were published in the *C. & D.*, May 19, 1894, page 695.

23/40. *T. H.*—Paper-varnishes.—The three varieties of paper-varnishes in use are (1) the mastic varnish, made by dissolving 3 oz. of mastic in a pint of spirit, and used for fixing pencil-drawings; (2) the Canada-balsam varnish, which in its simplest form is a mixture of equal parts of Canada balsam and spirit of turpentine, and used for varnishing maps and wall-paper; and (3) the acetone varnish. The latter is made by macerating 1 lb. of dammar resin with $\frac{1}{2}$ gal. of acetone in a closed vessel for fourteen days, and mixing three parts of the clear liquid with four parts of thick collodion. It is necessary to apply two or three coats of this varnish, and to wait until each coat is perfectly dry.

28/36. *Accountant.*—The book that you refer to is "How do I Stand?" written by Mr. George Weddell, and published by Messrs. Mawson, Swan & Weddell, Newcastle-on-Tyne, at 1s.

34/1. *W. A. C.*—Coloured Hypophosphite Syrup.—The black colour is doubtless due to some tannic contamination. The only thing you can do to remove it is to shake with animal charcoal and filter, or put a layer of the charcoal in a funnel and filter the syrup through it until decolorised. As there is no alkaloid in this, the treatment will not disturb its therapeutic properties.

24/3. *Nemo.*—(1) Text-books on Pathology.—The smaller standard works are Payne's "Manual of General Pathology," 12s. 6d. (Smith & Elder), and Heringham, Garrod and Gow's "Handbook of Medical Pathology," 7s. 6d. (Baillière). (2) Sachs & Vine's "Text-book of Botany," the one you are referring to, is out of print. It was published by the Clarendon Press at 31s. 6d., and could doubtless be obtained second-hand by advertising.

23/16. *Felo.*—Fever and Influenza Draught for Horse.—Each draught contains about 2 dr. of salicylic acid, dissolved by means of ammonia and a small quantity of spirit.

35/16. *J. W.*—Combined Toning and Fixing Bath.—See *C. & D.*, January 6, page 33, or January 13, page 73.

34/50. *C. D. S.*—Lemonade-powder for penny packets:—

Acid, tartaric.	5j.
Ol. limonis	℥xxx.
Tr. curcumi	5j.
Pulv. sacch. alb.	lb. j.

Mix the tincture with the sugar, and dry; then mix in the oil of lemon and tartaric acid.

The acid should be carefully dried before it is mixed with the sugar, and in packing the product into 1-oz. packets (sufficient for a pint of lemonade) care should be taken to employ tinfoil or vegetable parchment as one of the wrappers.

25/37. *Ciscart.*—The Boiler-fluid for preventing incrustation is the usual mixture of caustic-soda solution and tannin (see *C. & D.*, March 4, 1893, page 383). It is not correct to say it is non-poisonous.

25/58. *S. C. N.*—You will find it impossible to estimate the amount of colza oil in rape oil; an expert might do it approximately for you.

London Drug Statistics.

The following statistics are compiled from information supplied by public warehouses. They relate to the receipts and deliveries of some of the leading drugs from and into the London public warehouses from March 1 to 31, 1900, and to the stocks on March 31.

	March		Stocks		1900	
	Landed	Delivd.	1900	1899	Imprtd.	Delivrd.
Aloes cs &c.	141	194	2,524	2,553	554	394
" gounds	—	—	160	2,227	230	70
Anise, star cs	—	—	54	210	—	2
Balsams csks &c.	192	101	401	615	406	429
Cambura-root bgs	—	51	119	531	1	107
Camphor pkgs	72	243	1,950	4,789	1,442	1,262
Cardanoms cs &c.	452	471	2,347	1,652	1,746	1,109
Cinchona pkgs	2,540	3,526	13,849	18,873	5,941	8,191
Cubebs bgs	—	51	1,651	1,980	—	60
Dragon's-blood cs	—	20	99	33	4	39
Galls pkgs	937	371	1,314	3,035	1,030	1,224
Gums—						
Ammoniacum ..	—	5	63	102	7	7
Anini & copal ..	3,370	4,310	6,536	15,444	5,820	9,917
Arabic "	1,132	1,752	10,129	12,593	3,595	5,141
Asafetida ..	4	101	773	624	418	348
Benzoin	172	253	1,200	1,335	1,186	926
Damar "	415	337	4,153	3,219	3,751	837
Galbanum ..	—	—	14	19	—	2
Gamboge	—	26	459	317	—	49
Gaiaicum ..	—	12	53	62	21	17
Kauri tons	175	235	1,533	921	514	687
Kino pkgs	—	9	35	103	14	24
Mastic "	—	3	25	29	—	6
Myrrh, E. I. ..	7	44	275	378	53	93
Olibanum ..	1,143	918	2,743	3,890	3,067	2,004
Sandalac	105	63	732	751	552	228
Tragacanth ..	1,473	633	2,075	1,934	2,695	1,653
Ipecacuanha, Rio bls	137	81	196	78	186	192
" other kinds pkgs	99	55	152	53	171	135
Jalap bls	—	17	278	314	—	32
Nux vomica... pkgs	476	—	489	123	476	—
Oils—						
Anise cs	—	—	171	276	—	16
Cassia "	5	6	83	73	15	6
Castor pkgs	139	183	747	531	349	575
Cocoa-nut tons	173	193	351	164	430	371
Olive csks &c.	119	202	1,034	721	67	632
Palm tons	—	3	3	4	3	7
† Quinine sulph. lbs	22,551	18,343	197,617	131,715	47,705	24,653
Rhubarb chts	31	109	1,073	1,470	147	374
Sarsaparilla bales	66	84	317	339	321	301
Senna bls &c.	933	731	2,423	855	2,461	2,166
Shellac, all kinds cs	4,873	4,593	43,532	46,203	14,515	12,552
Turnerie tons	98	42	272	200	214	99
Wax, bees' pkgs	345	651	1,051	1,146	429	981
" Japan cs &c.	—	92	268	537	115	354

* Stocks of aniseed and cassia oils lying at Smith's Wharf and Brewer's Quay are not included in this return.

† Includes the quantity at Reel Lion, Ball, and Smith's Wharves; also the Decks.

The statistics of goods lying at City Commercial Wharf are not included in above returns.

NOTE.—Aloes in gounds is exceptionally scarce, but cases, &c., are in moderate supply, and there are further consignments on the way. The deliveries of benzoin in March were only about half those of the previous month, but the arrivals have not been so heavy of late; stock is a low one compared with previous years. Cinnamon is somewhat scarce, according to the stock. There was a slight increase in the deliveries last month, and the statistical position looks good for an advance. Cubebs, on the other hand, are not likely to improve in value, as stock is considerably in excess of requirements. According to statistics camphor is getting scarcer, the stock being 1,959 packages, against 2,130 packages. These figures cannot be taken as trustworthy, however, as there are some wharves which do not furnish returns; moreover, above figures refer to both crude and refined camphor. The famine in nux vomica appears to be coming to an end, and stocks have jumped up from 13 to 489 pkgs., and there are more shipments close at hand. There is still plenty of rhubarb in the warehouses, but in order to do business lower rates have to be taken. The stock of asafetida is about to be replenished with arrivals from the Persian Gulf, and lower prices may be looked for if quality is not fine. The stock includes a moderate amount of common quality salvaged from the recent fire. Kino shows by no means a large stock, and a certain proportion consists of small packages only. The bulk of the senna in the warehouses is of common grades, fine green leaf being exceptionally scarce.

Trade Report.

NOTICE TO BUYERS.—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C.: April 5.

THE principal topics this week are iodine and camphor. The combination in the former article terminated last month, and it is the subject of much speculation as to whether it will be renewed for another three years at the old figure. Certainly iodine will not be advanced—in fact, the preponderance of opinion is that it will be reduced. The “outside” parcels which occasionally come on the market seem to be increasing, and give rise to an uneasy feeling as to the future. The camphor monopoly is not yet in working order, letter advices from Japan being awaited. Meanwhile the selling brokers here are endeavouring to feel the pulse of the market, and it is reported that they are buyers, but not at the present high prices. Both German and English refiners have advanced their quotations this week, owing to the higher prices for crude. Quinine was active on Monday at slightly advanced rates, owing to favourable bark shipments from Java and good deliveries from the warehouses during March, but it suffered a relapse the next day. The high quotations for cod-liver oil continue, owing to the reports of the poor catch in Norway, but there is no improvement in the demand. The following are the principal changes of the week:—

Higher	Firmer	Easier	Lower
Almonds	Cocaine	Oil, cassia	Ammonia
Angelica	Condurango	Oil, castor	sulphate
Camphor	Ipecacuanha		Cocoa-butter
Gentian			Quinine
Oil, turpentine			(sec. hands)
			Shellac

Arrivals.

The following are among the principal arrivals of drugs, &c., at the principal ports of the United Kingdom from March 28 to April 4 (both inclusive):—Aloes, (*via* Hamburg) 35 cases, (from Mossel Bay) 82; areca-nuts, 54; argols, (Ital.) 55, (Span.) 30; arrowroot (W.I.), 115; asafetida (Persian Gulf), 164; “balsams” (from Maranham), 10; benzoin, 36; bismuth (Queensland), 9; buchu, 54; camphor (from Hamburg), 503; capsicums (W.C.A.), 165; cardamoms, 235; castor oil (Ital.), 10; ehamomiles, 5; ciuchona, (Ceylon) 81, (Java) 1,146, (from Amsterdam, in cases) 111, (Guayaquil) 8, (from Valparaiso) 38; citronella oil, 71; cocaine (crude), 6; cochineal, 21; cocoa butter, 64; cocculus indiens, 64; cod-liver oil, 139; copaiba, 10; cus-cus, 16; eucalyptus oil (Amst.), 32; fenugreek-seed, 163; galls, (Persian) 1,077, (from Hamburg) 50; “gums” (arabic and tragacanth from Persian Gulf ports), 2,253; gum arabic (Australian), 146; hemlock-bark, 50; honey (Ital.), 48, (Jam.) 53, (Chil.) 77; insect-powder, 10; iodine, 91; jalap, 39; kola-nuts, 12; lemon-juice, 145; lime citrate, 91; lime-juice (W.I.), 193; lime oil, (W.I.) 6; liquorice-root (Prsn.) 123; nux vomica, (Calcutta) 2,000 pockets, (Cochin) 413 bags, (Madras) 147 bags; opium, 22, (Persian) 31; oils, essential (Chinese), 50; orange peel, 5; picric acid, 25; pistachio-nuts, 7; quicksilver (Ital.) 500; quillaia, 169; saffron, 1; sandalwood, 650; sarsaparilla (from New York), 13; senna (Alex.), 32; soy (Chin.), 242; sulphur (Sic.), 1,655; turmeric, (Calcutta) 203, (Cochin) 824, (Bombay) 54; vanilla, 30; wax, bees’, (Fr.) 5, (Span.) 45, (E.I.) 2, (Belg.) 28, (W.I.) 7, (Australian) 21, (Ital.) 14, (Chil.) 30; wax, Japanese, 99

Curacao Aloes.

The exportation of aloes from the island of Curacao during 1899 was again an unprofitable trade, according to Mr. Consul Jesurun’s report (F.O. No 2,392, 2d.). The low prices obtained for the drug, added to the high rate of export-duty at Bonaire and Aruba (where the aloes is produced) and the import duty at Curacao, which was almost prohibitory, made the profit nil, or very insignificant, and dissuaded merchants from acting. It is satisfactory, however, to learn that the Netherlands Government have at last decreed that “on aloes no export-duties shall be charged throughout the colony of Curacao.” This decree (the Consul says) ought to produce beneficial results, as with facilities a regular trade will spring up. In 1898 the imports into Curacao were 35,720 kilos., valued at 2,684fl., against 7,195 kilos. (536fl.) in 1897, and 35,870 kilos. (3,189fl.) in 1896. The exports of aloes from Aruba in 1898 were 257,518 kilos. (15,451fl.); 1897, 176,470 kilos. (10,588fl.); and 1896, 195,125 kilos. (11,707fl.).

Cod-liver Oil Prospects.

At the annual shareholders’ meeting of Messrs. Southall Brothers & Barclay (Limited) on March 30, the Chairman (Mr. Thomas Barclay), in the course of his remarks, said that the cod-liver-oil season commenced with better prospects than they had had for several years past, the cod being distributed over the whole of the Lofoten islands, but, to the surprise of every one, the fish gradually left the East Lofoten coast and, so far as that district was concerned, the fishing had been a failure and the majority of the boats had sailed to the West. Writing from Balstad, the company’s manager stated that the number of fish caught up to date in the Lofotens was the lowest ever known. He added: “You are, of course, aware that I only use livers from fish freshly caught, but, so far as my information goes, I should think that, generally, there never was so much bad oil made in any previous year. As an illustration, I may say that I have known some of the manufacturers buy livers on a Friday and keep them until they had brought livers from other stations, and not convert them into oil until the following Monday, and the stench on board the ships and in some of the factories is more than I can stand. This is to some extent due to the fact that the dregs are kept on board, so that the inferior oil may be pressed from them when the season closes.” There was every reason to expect, Mr. Barclay added, that the total yield of oil would be small.

Heavy Chemicals.

[These prices are for market-centres other than London.]

The general condition of the heavy-chemical market continues very satisfactory and practically unchanged. The all-round demand is fairly constant, and the new business which is being transacted, together with orders for deliveries against existing contracts, is quite sufficient to keep stocks on the low side. The home consuming-trades are, generally speaking, well employed, papermakers especially continue to be exceptionally busy, and all the mills are getting through large quantities of raw materials. Carpet manufacturers find orders fairly numerous, and in fact some firms find it necessary to work overtime. Similar remarks apply to the dyeing, calico-printing, and bleaching industries. Soap manufacturers are busy, whilst the pottery and glass trades are quieter. The paint and colour trades are, on the whole, in a very satisfactory condition. Prices of all products are for the most part fully and easily maintained, and there is every likelihood of this condition continuing.

ALKALI-PRODUCE.—Bleaching-powder keeps in fairly good request, softwood casks on rails 6l. 10s. to 6l. 12s. 6d., and f.o.b. Liverpool or Tyne 6l. 12s. 6d. to 6l. 15s. Caustic soda in demand and steady at late rates, 76 to 77 per cent., 11l. to 11l. 5s.; 70 per cent., 10l. 2s. 6d. to 10l. 5s.; and 60 per cent., 9l. 2s. 6d. to 9l. 5s. per ton, f.o.b. Liverpool. Ammonia alkali steady, at 4l. 7s. 6d. to 4l. 12s. 6d. per ton in bags, free on rails. Soda crystals are moving well at 2l. 17s. 6d. Tyne, and 3l. to 3l. 2s. 6d., f.o.b. Liverpool. Soda ash 5l. 5s. to 5l. 10s. per ton, f.o.b. Tyne. Salteake is quiet, at 25s. to 26s. per ton, free on rails in bulk. Yellow prussiates of potash very firm, best Lancashire makes about 8½d. per lb. Chlorates steady, with fair business passing. Potash 4½d. per lb., and soda 4½d. to 4½d. per lb. Bicarbonate of soda in casks 6l. 7s. 6d. per ton, and in 1-cwt. kegs 7l. per ton, f.o.b. Liverpool. Glauber’s salts 30s. to 32s. 6d. per ton in bags on rails. Hypsulphite of soda is very firm at 6l. 15s. per ton in 7-cwt. to 8-cwt. casks, and 7l. 10s. per ton in 1-cwt. kegs. Silicates of soda in steady request and very firm, 140° Tw., 3l. 17s. 6d. to 4l. 5s.; 100° Tw., 3l. 12s. 6d. to 4l.; and 75° Tw., 3l. 5s. to 3l. 10s., all per ton, f.o.b. Tyne or Liverpool in usual casks, with usual extras for other packages.

SULPHATE OF AMMONIA weak, and from 3s. 9d. to 5s. per ton lower. Exports from Leith last week amounted to 270 tons.

Liverpool Drug Market.

Liverpool, April 4.

CASTOR OIL.—Good seconds Calcutta is still steady at 3½d. to 3½d. per lb., but the tone is not quite so firm, in consequence of

slightly lower quotations forward. French is practically unaltered, at $3\frac{3}{4}d.$ to $3\frac{1}{2}d.$ per lb. for first-pressure, and the same price for Belgian; $3\frac{1}{4}d.$ for second Belgian, and $3d.$ for second sulphur French. Madras is held for $3\frac{1}{2}d.$

CANARY-SEED.—After the somewhat large business of last week the market has assumed a quieter tone, and the only business to report is a lot of 50 bags bright Turkish at $34s. 6d.$ Holders are talking of $35s.$ per quarter.

POTASHES are in steady demand, at $27s. 6d.$ to $27s. 9d.$ per cwt.; and pearlashes, $33s. 6d.$ to $35s.$ per cwt.

COPAIBA.—A sale is reported of 4 barrels bright Maranham at $1s. 6\frac{1}{2}d.$ per lb. The s.s. *Brunswick* has arrived, and is reported to have brought a small consignment of Maranham.

QUASSIA-LOGS.—Sales are reported at $3l. 15s.$ to $4l.$ per ton from the quay, in parcels of 2 to 5 tons.

QUILLAI-BARK.—Several lots of 3 to 6 tons each have changed hands at $13l. 7s. 6d.$ to $13l. 10s.$ per ton.

WAX, CARNAUBA.—Business has been done in grey at $77s. 6d.$ to $80s.$ per cwt., and for fine yellow $90s.$ per cwt. is asked.

AFRICAN GINGER.—For the small remaining stocks on the spot holders are very firm at $30s.$ per cwt.

CILLIES (SIERRA LEONE).—Sixty-one bags have been sold from the quay at $45s.$ per cwt. Fair quality yellowish is held for $40s.$ to $45s.$ per cwt.

BEE-SWAX.—Six packages Peruvian mixed wax are reported sold at $7l. 5s.$ per cwt., and an arrival of 27 bags was sold afloat at a private price.

TURNERIC.—Further sales of 50 bags split bulb Cochín have been made at $10s. 6d.$ per cwt. 203 bags Bengal turmeric just arrived, and will be offered at auction.

TURPENTINE has advanced during the week, and holders are now very firm, at $42s. 3d.$ per cwt.

GUM ACACIA.—There is practically no business to report, but holders tenaciously cling to the small stocks here. Values range from $67s. 6d.$ to $75s.$ per cwt. for fair to good Soudan sorts.

SULPHATE OF COPPER is unchanged, at $26s.$ per ton—makers' price—but business is still being done by second-hand holders at somewhat under this figure.

German Drug Market.

Hamburg, April 3.

Business on our drug-market is quiet, and there are only a very few articles looked upon with interest.

AGAR-AGAR.—Spot delivery has sold at $365m.$ per 100 kilos.

ANTIMONY is quiet and a little lower, at $39m.$ per 100 kilos.

BALSAM, PERU, is weak, at $13m.$ to $12\frac{1}{2}m.$ per kilo.

CITRIC ACID is firmer again, at $290m.$ per 100 kilos.

CAMPHOR is a strong market, at advancing prices. The Formosan camphor-monopoly is much discussed here, and refined camphor has advanced $10m.$ per 100 kilos; second-hand holders quote $455m.$ per 100 kilos.

CEVADILLA-SEED is lower, at $77\frac{1}{2}m.$ per 100 kilos.

ERGOT OF RYE is quiet, and without much demand; prompt shipment can be bought at about $400m.$ per 100 kilos.

IPECACUANHA, CARTHAGENA, is offering at $17m.$ per kilo. Seventeen bales Rio have arrived from Montevideo this week.

LYCOPodium shows a strong market and a better demand. To-day's quotation is $480m.$ per 100 kilos.

MENTHOL is quiet, at $19m.$ per kilo.

IODINE-PREPARATIONS here are still unchanged, but the factories warn their customers against contracting just now above their immediate wants.

SPERMACETI is very firm and dearer, at $300m.$ to $305m.$ per 100 kilos.

COD-LIVER OIL is very firm, at advancing prices; non-congealing oil quotes to-day $95m.$ per barrel.

SEAR-ANISE OIL is firmer, at $13\frac{1}{2}m.$ per kilo.

The Sicilian Market.

Messina, March 27.

OIL OF LEMON.—To-day's price is $3s. 2d.$ per lb., e.i.f., but there are only a few sellers at this figure, as dealers look for an improvement shortly, especially for oil derived from fresh fruit.

OIL OF BERGAMOT remains steady at $6s. 2d.$ per lb., e.i.f., for oil containing 38 per cent. and upwards of linalool ester.

CONCENTRATED LEMON-JUICE and CITRATE OF LIME are both steady, sellers not being anxious to accommodate buyers at the current price, which is $15l. 10s.$ per pipe, f.o.b. Messina.

LEMON-PEEL IN BRINE.—After a long period of depression this article has suddenly advanced to $26s.$ per pipe, and $27s. 6d.$ for large size. Before the advance there were no purchasers even at $25s.$

Cablegrams.

SMYRNA, April 5, 11.28 A.M.:—The opium-market remains steady. The sales during the week have amounted to 10 chests of choice druggists, and the price is the equivalent of $9s. 3d.$ per lb. f.o.b. Smyrna.

BERGEN, April 5, 11.40 A.M.:—The cod-fishing season at Lofoten is almost at a close and Finmarken has only made a small beginning. The catch is 15,533,000 fish, as against 18,661,000 last year, yielding 15,670 barrels of oil, as against 18,888 barrels at the same time last year. Prices are rapidly advancing, no sellers being found at $90s.$ per barrel for refined oil, f.o.b., Bergen.

* * * *

NEW YORK, April 5, 2.39 P.M.:—The market here is lifeless and inactive. Opium is firmer at $\$3.25$ per lb., and quinine unsettled at $31c.$ per oz. Rio ipecacuanha is firm at $\$2.90$ per lb., while buchu is lower, $20c.$ per lb. being now the figure. Ergot is weak at $48\frac{1}{2}c.$ per lb., but cannabis indica is scarce, and $20c.$ per lb. is now obtained. Norwegian medicinal cod-liver oil is advancing, the latest quotation being $\$25$ per barrel.

London Markets.

ACID, CARBOLIC.—Dull of sale, at $10\frac{1}{2}d.$ per lb. for 39° to 40° C. crystals, and $10d.$ for 34° to 35° C. Crude is easier, at $2s. 4d.$ per gal. for 60 per cent., and $2s. 9d.$ for 75 per cent.

According to the accounts relating to the trade of Germany (issued by the Board of Trade) in January, 1900, the exports of carbolic acid amounted to 186,100 kilos, against 197,900 kilos. in 1899, and 1,047 for 1898.

ACID, CITRIC.—Quiet, at $1s. 3\frac{1}{2}d.$ to $1s. 4d.$ per lb. for English crystals.

ALTHEA-ROOT.—Continental advices report that a further rise in prices is expected before the new harvest is due. There is a spring crop in prospect, estimated at about 4,000 kilos., but it is hardly likely to have any influence upon prices.

ARECA NUTS are firmer in second-hands, from $16s. 6d.$ to $17s.$ per cwt. having been paid for good sound Ceylon.

ARROWROOT in good supply at Wednesday's public sales met with no demand, and was all bought in.

ARSENIC remains firm at $20l. 10s.$ per ton for best white powder.

ASAFETIDA.—Quiet. About 164 packages from the Persian Gulf are now landing, but they will probably not be offered until the next auctions.

BELLADONNA ROOT is quoted at $40s.$ spot for good medium. Leaves are very scarce and practically unobtainable.

BENZON.—Sumatra has been in fair demand since the auctions, quantities ranging from $7l. 10s.$ to $8l. 10s.$ per cwt. changing hands. The chief inquiry is for common Sumatra at about $5l. 10s.$, of which there is practically nothing to be had. Over 100 cases Sumatra have arrived during the past fortnight; 20 cases of Palembang seconds have also arrived this week.

CALUMBA is firmer, sales in second-hands having been made at $27s.$ to $28s.$ for natural, and $55s.$ for London picked and washed.

CAMPHOR (REFINED).—The German refiners have again advanced their prices $\frac{1}{2}d.$ per lb., and now quote bells in ton lots at $2s. 0\frac{3}{4}d.$ per lb. for immediate delivery, and $2s. 1\frac{1}{4}d.$ for delivery over three months. English refiners also announced an advance of $1d.$ per lb. on Monday, bells and flowers in $\frac{1}{2}$ -ton lots now being $2s. 2\frac{1}{2}d.$, and smaller quantities $2s. 3d.$ Tablets, 4 oz. to 16 oz., are quoted $2s. 3\frac{1}{2}d.$, 1 oz. and 2 oz. $2s. 5d.$, $\frac{1}{2}$ oz. $2s. 5\frac{1}{2}d.$, $\frac{1}{4}$ oz. and $\frac{1}{8}$ oz. $2s. 6d.$ per lb. in $\frac{1}{2}$ -ton lots. The English refiners have now decided that there will be no reduction beyond the $\frac{1}{2}d.$ per lb. for $\frac{1}{2}$ -ton lots and upwards. The second-hand quotation for German refined is $2s. 1d.$ per lb., but the supply is practically exhausted on the spot. It is reported that a parcel of Japanese refined camphor in 1-oz. tablets has been sold on the spot at $2s. 0\frac{3}{4}d.$ per lb. About 300 cases Japanese refined camphor in 1-oz. tablets arrived on the New York market last week, nearly half of which has gone direct to consumers, being sold "to arrive" at full prices.

CAMPHOR (CRUDE).—The market has been rising daily. Early in the week (Tuesday) several hundred piculs of

Japanese crude changed hands at from 177s. 6d. to 182s. 6d., c.i.f., for March-April shipment, but later in the day that figure was refused, sellers holding out for 185s., c.i.f., which is the quotation to-day. On the spot 100 piculs are reported sold at 187s. 6d., and on Wednesday 192s. 6d. was asked. It is said that the selling-brokers for the agents of the Japanese Government are not yet able to report business, and until letter-advice have been received from Japan giving further particulars, it is unlikely that any transactions will occur. Meanwhile they are reported to be in the market as buyers, but present prices are too high.

CINCHONA.—The Nederlandsche Veem cinchona-bark department at Amsterdam report that the shipments during March, 1900, from Java to Europe, amounted to 650,000 Amsterdam lbs., and for the three months of the present year to 1,906,000 Amsterdam lbs. The following are the corresponding figures for previous years:—

—	1899	1898	1897	1896	1895
Amsterdam lbs.,					
March	977,000	730,000	504,000	557,000	449,000
January to					
March	2,025,900	2,353,000	1,350,000	2,073,000	1,362,000

The exports from Ceylon for the week ending March 12 were 51,662 lbs., showing a considerable increase, as from January 1 to March 5 of the present year they have only been 46,709 lbs. From January 1 to March 12, 1900, the shipments have been:—

	1900	1899	1898	1897
Lb. ...	98,371	141,573	154,188	87,355

The exports from British India for the nine months ended December, 1899, were 2,092,760 lbs., against 956,939 lbs. in 1898, and 952,762 lbs. in 1897.

COCOA-BUTTER.—In auction 100 tons Cadbury's brand sold at 1s. 5½d., down to 1s. 4½d., rising to 1s. 4¾d., per lb., being about 1½d. lower. At the Amsterdam auctions on Tuesday, 70 tons Van Houten's sold at 84½c. to 90c., the average price being 85.30c.; 12 tons Helm sold at 83.83c., 4 tons De Jong at 83c., and 2 tons Holland at 82½c. to 82¾c., while 7 tons Mignon were bought in.

COCAINE.—The market is distinctly firmer, makers' price of 16s. 3d. per cz. for the hydrochloride having been paid this week for the brand (most in favour, so that there are practically no sellers from second-hand at anything tangibly below this figure. Less-esteemed make can be had at 15s. 9d. in second-hands. Six packages of crude have arrived this week.

CONDURANGO.—Advice from the German market report that first-hand stocks are now practically exhausted, 195m. per 100 kilos. having been obtained. In second-hands higher prices are asked for the limited quantities available.

DRAGON'S-BLOOD.—Firmly held, at 10l. per cwt. for *Reeds* and 20l. for fine lump. Although the stock in the warehouse is 90 packages, a large proportion of it consists of Zanzibar drop, for which there is little demand. Nine cases of Singapore lump have arrived this week.

The exports from Singapore to Great Britain from January 1 to February 28 have been 8 piculs only. The following are the exports for the corresponding periods of previous years (in piculs):—

	1899	1898	1897	1896	1895
Jan.-Feb. ...	64	13	3	37	75

GALLS.—On the spot small sales of Persian blue have been made at full values. C.i.f. sales have also been made at 32s. 6d. per cwt. for goods now landing. Green and white Persian are neglected. At the dysaltery-auctions, 150 cases fair Japanese offered and readily sold, at 65s. per cwt. The c.i.f. quotation is 61s. 6d. for April-May shipment.

GENTIAN has been in more inquiry this week at higher prices. On the spot good current quality has sold at 16s. per cwt., while another dealer asks 15s. c.i.f. A parcel of dry Syrian root sold at 14s. 6d. to 15s.

GUM GUAIACUM.—Six cases of fine free drop have arrived this week, and a few others of common grades.

GUM OLIVANUM.—The sales in auction were as follows:—Bollalish drop, 41s., subject dark mixed ungarbled sorts,

27s. to 27s. 6d.; mixed reddish ungarbled, 25s., subject; dark garblings, 18s.; boldish siftings, 20s.

GUM TRAGACANTH.—A considerable business has been done this week in goods ex *Arabistan*, and full prices have been paid. The following are the current quotations:—Firsts, 14l. 10s. to 14l. 15s. per cwt.; seconds, 12l. 10s. to 13l. 10s.; thirds, 11l. to 12l.; and fourths, 8l. to 10l. 15s.

IODINE.—It is believed that a change will occur shortly when the term for which the syndicate has been concluded expires. This would appear to be about due now, and it is understood that negotiations have been going on for its renewal, but so far nothing definite has transpired. In the meantime, until official news is available, the market is extremely unsettled. The Iodine Syndicate have been more than usually troubled of late with the arrival on the London market of parcels from Japan and other quarters not controlled by them. Recently a parcel of 10 cases of Japanese iodides and iodoform came to hand, the quality of which was reported to be quite equal to British make. It is interesting to note that about 1,000 lbs. of crude iodine was shipped to Europe in January of this year, as reported by our Japanese correspondent on January 25. Two consignments of crude, consisting of 44 and 47 kegs respectively, have also arrived at Liverpool this week per the s.s. *Liguria* from Valparaiso, but they are understood to be for the Syndicate. An important circular has been issued by Messrs. Scherings, dated March 30, saying that their attention has been called to the fact that in Glasgow negotiations are now in progress for the prolongation of the West Coast syndicate, but that on this occasion there are adverse circumstances in operation which appear to make it questionable as to whether the convention will be continued. They also state that no change has been made in the price of iodine preparations at this time of uncertainty, and they express the hope that their customers will, in their own interest, only purchase iodine preparations in such quantities as will enable them to remain within the limits of the "falling clause," by means of which the iodine-manufacturers guarantee an adjustment *in kind* if there should be any fall in prices within three weeks after receipt of orders. Dearer iodides are therefore of remote possibility, cheaper ones a probable contingency, and in the meantime it would not appear advisable to buy any iodine preparations except from hand to mouth. The present price of the crude is 7½d. per oz., to which figure it was reduced three years ago when it stood at 9d. Since the above was written we learn that the syndicate terminated at the end of last month.

IPECACUANHA.—Since the auctions quite 6d. per lb. advance has been paid for Rio root—viz., 11s. 3d., and 11s. 6d. is now asked. The principal holders of Cartagena are firm at 7s. 6d. per lb., but there is a cheap seller at 7s. 3d.

JALAP.—There has been a small inquiry this week: spot holders ask 6¼d. per lb. Thirty-nine bales have arrived this week from New York.

KOLA-NUTS.—At the spice-auctions 7 packages West Indian offered and sold at 4¼d. per lb.

MENTHOL.—Quiet, with sellers at 8s. 6d. per lb. spot, and perhaps a shade under. The parcel of damaged (weighing about 1,200 lbs.) ex s.s. *Bombay* has been sold for export for the Continent at 6s. per lb., a high figure considering that it will have to be re-crystallised. Five case lots of Kobayshi brand are offered at 8s. 3d.

NUX VOMICA.—Part of the parcel of Calcutta seed offered in auction last week and bought in, has since been sold at 9s. per cwt. for small dark.

OIL, CARDAMOM, has been reduced to 4s. 6d. per oz.

OIL, CASSIA.—Very quiet on the spot, at 3s. 8d. per lb. for 80 to 85 per cent. To arrive, the following are the quotations:—Eighty to 85 per cent., 3s. 2d. per lb. c.i.f.; 75 to 80 per cent., 3s. 0½d.; and 70 to 75 per cent., 2s. 11d. The tendency is easier.

OIL, CASTOR.—Values are slightly easier. Belgian, first-pressing, spot, is now quoted at 31s.; second-pressing, 28s. 6d. per cwt. Hull make is 33l. 5s. per ton for best medicinal in barrels, and 3½d. per lb. in cases. Pure firsts, 30l. 15s.; seconds, 29l. 15s. per ton in barrels; firsts, 3½d. per lb. in cases, and seconds, 3½d. ex wharf, London.

Medicinal French is quoted 35s. to 35s. 6d. on the spot in barrels, and 38s. to 38s. 6d. in cases. Italian ditto is 4d. to 4½d. per lb. in tins and cases on the spot. Advices from Calcutta, dated March 15, state that a considerable advance in values has taken place owing to the very high rates ruling for seed and small production of oil. Liverpool, good seconds quality has sold at 11-8rs. for March and 11-4rs. for April-May delivery, but sellers ask a further advance. The exports of castor oil from British India for the nine months ended December, 1899, were 1,278,017 gals. against 1,788,721 gals. for the corresponding period of 1898, and 1,569,745 for 1897.

OIL, COD-LIVER.—The lowest business quotation on this market on Wednesday was 90s. per barrel, c.i.f., and from that they range up to 100s. and 105s., but these latter quotations are nominal, and are not likely to be paid for some weeks, especially as buyers are holding off.

BERGEN, March 31.—The fishing during the past week has been exceedingly poor, and the weather partly stormy. We have, therefore, no longer anything better to look forward to than a total failure of the Lofoten cod-fisheries. Non-congealing oil is at present very firm, at 80s. per barrel, f.o.b., and further daily advances may be expected. The exports from Bergen to date are 1,729 barrels, against 2,531 barrels at the corresponding period of last year. [See cablegram for to-day's prices.]

OIL, STAVESACRE.—English pressers have reduced their list-price to 4s. 3d. per lb.

OPIMUM.—A moderate amount of business has been done this week in manufacturing grades at unchanged prices. Druggists' is quoted at 9s. 3d. per lb., Salonica at 11s., and Persian at 12s. 6d. to 12s. 9d.

ORRIS.—Private advices from Italy report that the syndicate are holding out for 80s. per cwt., but dealers outside the syndicate quote picked Florentine at 53s. per cwt., c.i.f., sorts at 49s., and small white 48s. to 48s. 6d.

QUININE.—On Monday a good all-round inquiry for second-hand quinine made itself felt on the market, owing to small bark-shipments from Java for February, and slightly dearer prices were paid, including May delivery at 1s. 4½d. to 1s. 4¾d., June 1s. 4½d. to 1s. 5d., and August 1s. 5d. to 1s. 5½d. The improvement was maintained for that day only, as on Tuesday the market had a slight relapse of ¼d. to ¾d., May delivery selling at 1s. 4d., June at 1s. 4½d. to 1s. 4¾d., and August 1s. 5d. Since then this market has again declined, spot selling at 1s. 4d., June 1s. 4½d., and August 1s. 4¾d. It is said that America was responsible for the relapse.

The exports of quinine and quinine salts from Germany amounted to 1,046,500 oz. in January, 1900, against 777,000 oz. for the corresponding period of 1899, and 679,500 oz. in 1898.

SARSAPARILLA.—The s.s. *Orinoco* has brought 49 bales of genuine grey Jamaica root this week from Colon.

SENNA.—There have been a few inquiries for Tinnevely leaf, but second-hand holders ask extreme prices for anything of good colour, which makes business difficult. Senna pods have been scarce and dear throughout the season.

SHELLAC.—In auction on Tuesday 465 cases offered of which 325 sold at 1s. decline for common second orange, but higher grades about unchanged, fair TN being quoted 59s. to 60s. per cwt. The following prices were paid:—Fair bright reddish 59s. to 60s. per cwt., medium weak ditto 58s. to 59s. ordinary dull red 58s., common red livery 57s. to 58s., and blocky claret colour 55s. per cwt. Privately the demand is slow, both on spot and future delivery.

SPICES have been remarkably quiet this week. At auction Cochin *Ginger* was firmly held, and very little old: good cuttings at 27s. to 27s. 6d. per cwt., brown tips at 29s. 6d. to 31s. per cwt., and lined at 38s. 6d., common small native cut at 32s. 6d. to 33s. Washed rough was bought in at 32s. to 33s. for fair to good. The cut qualities offered were bought in at high limits. Zanzibar *Cloves* have fluctuated, closing a little under the highest at 4½d. per lb. for June-August delivery. At auction fair quality was bought in at 4½d. *Clove-stems* were withdrawn at 1½d. per lb. Zanzibar *Chillies* partly sold at 38s. 6d. per cwt. for very dark stalky. Rather mixed Japan sold at 40s. 6d. per cwt. *Capsicums* partly sold at 29s. 6d. to 32s. per cwt. for thin red on stalk, and dark cherries at 33s. per cwt. *Pimento* dull of sale, and all the parcels offered were bought in at 3½d. to 3¾d. per lb. for common to good. *Broken Cassia* sold at 26s. 6d. per cwt.

for common quality. *Cassia-vera* was bought in at 27s. per cwt. *Cinnamon-chips* were withdrawn at 3½d. per lb. *Pepper* quiet, but steady. Penang black was bought in at 5½d. per lb., and Alleppy at 6¼d. Lampong sold at 5½d. Singapore is quoted 6½d. on the spot, and at 6½d. for arrival. Penang white was bought in at 8½d. per lb. for good quality, and Singapore at 9¼d. per lb.

SUGAR OF LEAD is quoted at 25s. per cwt., c.i.f., for white, in quantities of 5 to 10 tons.

TURMERIC.—In auction 30s. per cwt. was paid for fine bright yellow Madras finger.

VANILLA.—At auction on Wednesday about 300 tins, most Seychelles, were offered, of which more than half sold at irregular prices, fine pods, of which there was a good selection, realising full rates as compared with last sales, while medium and common grades were about steady. The following prices were paid:—

Seychelles: Fair to good plump chocolate, 9 inches, 26s. (one lot); 8 to 8½ inches, 22s. to 24s.; 7½ to 8 inches, 22s. to 22s. 6d.; and 7 to 7½ inches, 21s. 6d. to 22s. per lb. *Mauritius*: 6 to 6½ inches, at 19s. to 20s.; 4 to 5 inches, 14s. to 16s. 6d. *Bourbon*: 3½ inches to 6½ inches, 15s. to 16s. *Madagascar*: Common, 3½ to 7½ inches, 12s. 6d. to 14s. per lb.

WAX, JAPANESE.—To arrive quotations are 1s. lower, there being sellers at 31s. 6d. per cwt., c.i.f. Spot holders are firm at 33s. 6d.

Coming Events.

Monday, April 9.

Pharmaceutical Society of Ireland, 67 Lower Mount Street, Dublin. Evening meeting at 8.15 p.m. "The Causes and Prevention of Typhoid and Tuberculosis (lantern-lecture), by Professor E. J. McWeeney.

Tuesday, April 10.

Royal Photographic Society, 66 Russell Square, W.C., at 8 p.m. "The Municipal Encouragement of Photography," by Mr. T. Bedding.
Bradford and District Chemists' Association. Annual dinner.

Wednesday, April 11.

Sheffield Pharmaceutical and Chemical Society, at 8.30 p.m. Open night.
Newcastle-on-Tyne and District Chemists' Association, Hôtel Métropole, Newcastle, at 8.30 p.m. "The Botany and Materia Medica of the Bible," by Mr. C. Ridley (President).
Meeting of North London Chemists (see page 571).

Recent Wills.

DRIVER.—The estate has been valued at 250,405l. gross, including personality of the net value of 225,200l., of Miss Mary Ann Driver, of Tittenhurst, Sunninghill, who died on January 7, aged 82. Miss Driver was the sister-in-law and sole legatee of the late Mr. Thomas Holloway, who left about £80,000l. Apart from sums bequeathed to various charities, Miss Driver has bequeathed to the trustees of the Royal Holloway College 10,000l. to found scholarships of 30l. per annum each, to be called "Miss Driver's Scholarships," to be open to competition amongst students who have resided at the college for one year at least, and to be tenable for periods of three years.

FENNINGS.—The will of Mr. Alfred Fennings, of Steinberg, Cowes, Isle of Wight, formerly of Salus Villa, Cowes, manufacturer of proprietary medicines, who died on January 7, aged 84, has been proved. He left personal estate valued at 72,526l., and has bequeathed 1,000l. to the Society for the Relief of Aged and Infirm Ministers, and 1,000l. to the Society for the Relief of Necessitous Widows of Protestant Dissenting Ministers.

WILLIAM B. GREIG, chemist and druggist, trading as Greig & Co., Old Kent Road, was, at Lambeth Police Court on Thursday, April 5, fined 5l., and 17s. 6d. costs, for selling weak camphorated oil. His explanation was that the oil sold was drawn off before all the camphor had dissolved.

THE MEMBERS of the Wolverhampton and District Chemists' Association had an enjoyable smoking-concert at the Star and Garter Hotel on March 21. The President of the Association (Mr. F. J. Gibson) was in the chair, and he was supported by the President and several members of the Midland Pharmaceutical Association,